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**Credible enticements: Public policy contingencies and  
enforceability in multinational subcontracting**

**Murtha, Thomas Philip, Ph.D.**

**New York University, Graduate School of Business Administration, 1989**

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**CREDIBLE ENTICEMENTS:  
PUBLIC POLICY CONTINGENCIES AND ENFORCEABILITY  
IN MULTINATIONAL SUBCONTRACTING**

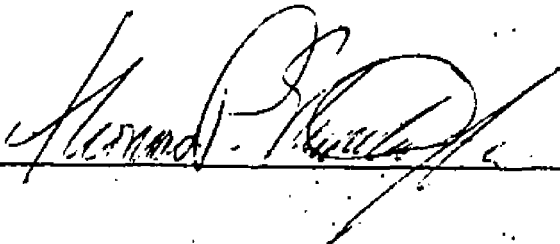
Thomas P. Murtha

A dissertation presented to the Graduate Faculty of the Stern School of Business Administration, New York University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration.

1989

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## ABSTRACT

### CREDIBLE ENTICEMENTS: PUBLIC POLICY CONTINGENCIES AND ENFORCEABILITY IN MULTINATIONAL SUBCONTRACTING

THOMAS P. MURTHA

This dissertation presents an empirical investigation of host governments' strategic capabilities to shape multinational corporations' (MNCs') external supply (outsourcing) networks. The study used a structural equation model with latent variables to investigate hypotheses associating host government policy stability with managerial attitudes toward self-enforcing factors in MNCs' contractual relationships with state-subsidized domestic suppliers. The dissertation argues that as managers perceive decreasing host government policy stability, they perceive increasing risk that suppliers will unexpectedly lose their subsidies and demand contract renegotiations. Consequently, simple contracts offer decreasing assurances of supplier performance. MNCs, therefore counterbalance perceptions of policy instability, by according increasing importance to self-enforcing factors such as transaction-specific asset exposures, which impede supplier withdrawal from relationships. Data to operationalize the model were gathered from archival sources and from a field survey of 111 affiliates of 23 U.S. MNCs operating in 16 industries in 36 countries. Statistical tests support the dissertation's main argument.

Managerial perceptions of policy stability and of self-enforcing factors are also shown to systematically associate with cross-national variation on three empirical attributes of host national political organization. This relational pattern appears consistent with a rough distinction among

**ABSTRACT: Thomas P. Murtha (continued)**

developing and industrialized countries in their emphasis on state-dominant versus private-sector-inclusive approaches to industrial strategy implementation. The importance of self-enforcement associates positively and significantly with characteristics of state dominance, but bears no significant relationship to characteristics of private-sector inclusiveness. Several alternative explanations are proposed for this difference, including differences among the groups of countries in financial resources, number and specificity of policy instruments, and institutional development.

## ACKNOWLEDGEMENTS

This study began in the hope of blending institutionalist theories of the international firm and of the nation state to arrive at a mutually-consistent model of relations between multinational corporations and host governments. If the completed dissertation lacks anything of inclusiveness, rigor, or connectedness to practical affairs, the fault is mine for failing to comprehend and implement the thoughtful guidance which my committee members offered. Stephen J. Kobrin served as chairman while at New York University, and remained committed to this role despite mounting complications and competing demands when both he and I moved to different institutions. As an advisor and scholar, he represents a system of values which I regard as an enduring source of motivation. Robert T. Kudrle has taken a continuous, active interest in my progress, through many, busy years since I studied with him as a master's degree student in public affairs. Thomas N. Gladwin encouraged some of my earliest thoughts on the matters discussed here. I am especially grateful to each of these men.

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Kavesh were committee members or readers giving advice and approvals at different stages of the formal process. The faculty panel members of the 1985 Doctoral Consortium of the International Management Division of the Academy of Management offered important advice and encouragement. Dongho Lee and Susan Kimmel helped with data coding and processing, and Carol Mohr prepared the bibliography.

The project received financial support from the Taggart Fellowship endowment at the Stern School of Business Administration, New York University. The University of Michigan, School of Business Administration was generous in providing summer funding, computer time, staff assistance and patience as I worked toward completion after I became employed there. The Conference Board provided access to its Key Companies Directory, and incurred the costs of computer runs to arrive at lists of potential respondents.

I appreciate the time which executives of the participating companies took to understand the project's complex needs, and respond to the survey. Several should have been singled out for extraordinary advice and coordination assistance, if anonymity were not a condition of their firms' participations.

As a written work, I dedicate this undertaking to Philly H. Murtha, a writer, for the difficult and happy years when we shared writers' lives; and to our son Morgan Thomas Murtha, whose pride in my accomplishment seems gracious, in light of hours of togetherness sacrificed while I worked on it.

May, 1989

A handwritten signature in black ink, reading "Thomas P. Murtha". The signature is written in a cursive style with a large, sweeping initial "T".

## TABLE OF CONTENTS

<b>Chapter 1</b>		1
<b>Section 1.0:</b>	Research propositions in theoretical context	1
	Power and commitment	9
<b>Section 1.1</b>	Highlights and limitations of findings	11
	Cautionary notes for users	12
<b>Section 1.3</b>	Conclusion and plan of the study	15
	Plan of the study	16
<b>Chapter 2</b>	<b>International Business Strategy, Foreign Direct Investment and MNC/Host Country Relations</b>	17
<b>Section 2.0</b>	Introduction	17
<b>Section 2.1</b>	Foreign direct investment theory, international business strategy and MNCs' external sourcing	25
2.11	Asset advantages	25
2.12	Transaction advantages and internalization	26
2.13	The value chain	26
2.14	Transaction cost economics	31
2.15	Transaction costs analysis and international business	32
<b>Section 2.3</b>	MNC/host country relations in an international strategic context of transaction-cost-economizing	38
<b>Section 2.4</b>	Conclusion	46
<b>Chapter 3</b>	<b>States, Social Interests, and Industrial Targeting</b>	48
<b>Section 3.1</b>	Introduction	48
<b>Section 3.2</b>	Host states' discretion and MNCs' international strategies	53
<b>Section 3.3</b>	Microeconomic choices and political interests	57
<b>Section 3.4</b>	Relational models of political structure	63
3.41	States, societies, and their relationships: definitional ambiguities	63
3.42	Political structural properties of states	66
3.43	Interest group structures of societies	67
3.44	The relationship between state and society	68
3.45	Case examples from Katzenstein	69
3.46	Factors underlying Katzenstein's relational case classifications	72
<b>Section 3.5</b>	Some observable measures of political structural attributes, compared to Katzenstein's operationalization of the relational framework	74



CONTENTS (continued)

3.51	Country rankings on candidate empirical correlates of relational dimensions.....	76
Section 3.6	Summary and conclusion.....	90
<b>Chapter 4</b>	<b>A Model of Political Environments, Public Policy Contingencies and MNCs' Supplier Relationships.....</b>	<b>93</b>
Section 4.0	Overview.....	93
Section 4.1	Overview of methodology.....	94
Section 4.2	A model of country capabilities, perceived political environments, and contractual form in public- policy-contingent relationships.....	96
Section 4.3	International strategy, domestic environments and the organization of MNCs' activities.....	117
Section 4.4	Summary.....	128
<b>Chapter 5</b>	<b>Operationalization, Testing and Results.....</b>	<b>130</b>
Section 5.0	Introduction.....	130
Section 5.1	Statistical method.....	130
5.11	Latent variable measurement: how confirmatory vs. exploratory approaches relate to causality and structural equation modeling.....	131
Section 5.2	The measurement model: data gathering, item selection and confirmation.....	133
5.21	The questionnaire survey: prospective respondent identification, data gathering and characteristics of respondents.....	136
	Participant identification and data gathering.....	136
	Characteristics of the respondent group.....	138
	Participant self-selection and industry over-representation.....	144
5.22	Construct validity and reliability.....	146
	Construct validity.....	146
	The relationship of validity to reliability.....	148
5.23	Item selection and reliability tests for latent variables.....	149
	Firm-specific cost advantage (INTERN).....	150
	Reliability for the dependent latent variables.....	153
	Institutional/legal environmental stability (ILESTAB).....	153
	Self-enforcing contracts (SELCON).....	154
5.24	Managerial estimates of outsourcing (OUTSRC) and value-added (VALADD).....	158

CONTENTS (continued)

5.25	Conclusion of field survey and measurement discussion.....	159
<b>Section 5.3</b>	<b>Estimation procedure and results.....</b>	<b>159</b>
5.31	Estimation technique and statistical assumptions....	160
5.32	Sample size.....	163
5.33	Overall results.....	164
5.33.1	Parameter estimates of model using unadjusted OUTSRC and VALADD.....	171
	Fit of the model's internal structure.....	171
	Overall model fit.....	173
5.33.2	Parameter estimates with industry-mean-adjusted OUTSRC and VALADD.....	174
	Fit of the model's internal structure.....	177
	Overall model fit.....	178
	A test of statistical independence of countries and industries.....	179
5.34	Disconfirmatory findings.....	182
	Unexpected relationships.....	182
	Non-significant paths.....	186
<b>Section 5.4</b>	<b>Conclusion.....</b>	<b>189</b>
<b>Chapter 6</b>	<b>Conclusion: Policy Implications; Further Research Directions.....</b>	<b>190</b>
<b>Section 6.0</b>	<b>Introduction.....</b>	<b>190</b>
<b>Section 6.1</b>	<b>Summary of objectives and findings.....</b>	<b>190</b>
<b>Section 6.2</b>	<b>Reconciling government and corporate strategies.....</b>	<b>193</b>
<b>Section 6.3</b>	<b>MNCs and national institutions.....</b>	<b>195</b>
<b>Section 6.4</b>	<b>A question.....</b>	<b>196</b>
<b>Appendix 1</b>	<b>Questionnaire.....</b>	<b>202</b>
<b>Appendix 2</b>	<b>Reliability.....</b>	<b>212</b>
<b>References.....</b>		<b>218</b>

## LIST OF FIGURES AND TABLES

### Figures

2.1	The Value Chain.....	27
2.2	Framework for analysis of international strategy.....	29
3.1	8-cell analysis of Katzenstein's country cases.....	69
3.2	4-cell matrix of Katzenstein's country cases.....	70
3.3	Katzenstein's cases: formulation and implementation dimensions.....	73
4.1	Path diagram of model with variable classifications.....	97
4.2	Path diagram of structural equation model with expected signs.....	102
4.3	Country FDI stock as a function of overall transaction costs.....	122
5.1	Path diagram: combined structural equation and measurement model..	135
5.2	Path diagram for reliability of independent variables.....	152
5.3	Path diagram for reliability of dependent variables.....	153
5.4	Path diagram of estimated structural equation model (unadjusted)..	169
5.5	Path diagram of estimated model (industry adjusted).....	170

### Tables

3.1	Sample countries ranked on single party dominance.....	78
3.2	Sample countries ranked on legislative party fractionalization....	82
3.3	Sample countries ranked on central government revenue.....	86
4.1	Variable list for structural equation model.....	127
5.1	Usable respondent group segmented by industry.....	140
5.2	Breakdown of respondents by industry and country.....	141
5.3	Respondent breakdown by title.....	142
5.4	Respondents by country categorized by per capita income.....	143
5.5	Item selection and reliability for independent latent variable...	151
5.6	Item selection and reliability for latent variable institutional legal environmental stability.....	155

LIST OF TABLES (continued)

5.7	Item selection and reliability for contractual self-enforcement latent variable.....	157
5.8	LISREL estimation without industry adjustment (ML).....	165
5.9	LISREL estimation without industry adjustment (ULS).....	166
5.10	LISREL estimation with industry adjustment (ML).....	167
5.11	LISREL estimation with industry adjustment (ULS).....	168
5.12	Mean and standard deviation of value-added by industry.....	176
5.13	Mean and standard deviation of local sourcing by industry.....	176
5.14	Mean and standard deviation of local sourcing by country.....	181
5.15	Cross-tabulation of mean local sourcing by country and industry.	182
5.16	Pearson correlation matrix of the directly-observed variables...	184

CHAPTER ONE

" . . . although governments can forbid certain kinds of activity, they cannot command business to perform. They must induce, rather than command."  
(Lindblom, 1977: 173).

**1.0 Research propositions in theoretical context.**

This study investigates host governments' strategic capabilities to shape multinational corporations' external supply networks. Many governments have implemented strategies to own, subsidize, finance, broker or provide statutory preferences to domestic firms which hope to supply intermediate or final goods to multinational corporations (MNCs). (See Evans, 1979; Freeman, 1982; Duvall and Freeman, 1981, Freeman and Duvall, 1984). These strategies generally employ policy instruments that equate analytically to subsidies which, if passed along may enhance MNCs' international cost competitiveness. But these subsidies also create strategic dilemmas for MNCs. No matter how generous or apparently free-of-strings, publicly-funded incentives can create a trojan horse of external dependence: what governments give they may also unexpectedly take away.

If governments renege, public-policy-contingent supply contracts may collapse or require renegotiation, imposing adjustment costs and possibly threatening MNCs' international competitive positions. This supposition underlies the main argument advanced and tested here. The study seeks to demonstrate that as managers' perceptions of government policy stability deteriorate, simple contracts become decreasingly adequate governance instruments for MNCs' affiliates' public-policy-contingent domestic commercial relationships. Consequently, MNCs which enter these relationships may accord increasing importance to self-enforcing factors, such as transaction-specific asset exposures which impede supplier withdrawal.

## Chapter 1

Transaction-specific assets, by definition earn inferior returns if transferred from their original, intended uses to alternative applications. For example, an automobile components supplier may invest in dies to stamp automobile fenders for a particular manufacturer, model and year. Transaction-specific assets create self-enforcing factors in contractual relationships, because they trigger automatic damages if their owners violate terms or withdraw. Once deployed, these may lock local suppliers into fulfilling public-policy-contingent contracts -- provided they can meet their variable costs -- even if governments withdraw assistance.

In recent years, factors which drive choices of contractual form in international commercial exchange have galvanized the curiosity of foreign direct investment (FDI) researchers (Buckley and Casson, 1976; Casson, 1979; Rugman, 1981; Hennart, 1982; 1986; 1987; Dunning 1977; 1988). These theorists applied transaction cost economics (Coase, 1937; Williamson, 1975; 1985) to explain why MNCs conduct international activities through equity-owned affiliates in countries, instead of trading or licensing domestic firms. The same frameworks help to explain MNCs' external sourcing patterns. MNCs may trade in spot markets, establish various forms of long-term contracts or set up subunits within organizational boundaries to obtain inputs necessary to their operations. They choose internal organization (internalization) when the costs of negotiating and writing contracts to govern an external relationship outweigh the economic benefits. These costs rise with uncertainty concerning contingencies which might affect contractual performance. Government policies affecting suppliers' costs, ownership structures or financial health exemplify a class of such contingencies.

Supplier relationships contingent on governments' involvements suffer from at least two sources of uncertainty, in addition to those common to all

contractual relationships. First, domestic politics may lead governments to unexpectedly alter policies which shape MNCs' incentives to contract with local suppliers. Second, contracts with sovereign states or contingent on governments' policies may prove difficult to enforce, because states themselves embody the enforcement mechanisms (Yarbrough and Yarbrough, 1987). In the logic of transaction cost economics, perceived uncertainty impedes the relationships which governments' local sourcing strategies set out to foster. Indeed, increasing uncertainty compromises national capabilities to implement any industrial strategies involving MNCs, as marginal firms become reticent to cooperate.

Research on multinational corporations (MNCs) has long recognized the tenuousness of business relationships whose viability depends upon host governments' policies. Many studies have sought support for the "obsolescing bargain" hypothesis (Vernon, 1971) that bargaining power shifts from firms to host governments, after MNCs conclude costly startup activities and facilities installations. In these circumstances, changing political winds may force MNCs to concede new terms on previously-agreed issues such as taxation and local equity ownership.

Kobrin has appraised bargaining theory in its general terms as "the currently-accepted paradigm of host country-MNC relations in international political economy" (1987: 610). As he points out, however, present evidence somewhat inconclusively circumscribes its domain. Researchers have established general determinants of relative bargaining power, but have not generalized the dynamic or direction of shifts outside of cases involving developing countries' extractive industries.

The difficulties of generalizing findings to manufacturing industries and industrialized countries may betoken a need to reframe the problem at a more

## Chapter 1

general level, to encompass cross-national institutional differences in the ways host governments deal with MNCs. Extractive MNCs in developing countries must often bargain directly and continuously with governments as resource owners. Non-extractive MNCs may less often bargain directly with governments except upon entry to a national market. Governments of industrialized countries and some market-oriented developing countries may bargain with MNCs only in certain circumstances or not at all (Encarnation and Wells, 1986).

Although host governments do not always bargain directly with MNCs, government policies always influence the domestic economic environments in which MNCs operate. If bargaining theorists' assumptions and findings apply to governments' indirect influence on MNCs via domestic environments, the country and industry generality of the framework accordingly increases. Countries differ in the degrees to which their governments' policies comprise coherent microeconomic strategies with programmatic impacts on domestic economic structures. These government industrial strategies interact with the international strategies of MNCs. Strategic interaction does not require direct contact between interdependent parties. In order to engage in strategic interaction, decision units need only plan their actions, anticipating others' subsequent actions (Schelling, 1960).

Many host government/MNC strategic interaction scenarios display essential features of the bargaining framework without any direct relationships between firms and governments. Executive or legislative turnover, interest group rent-seeking, unintended side effects of policies, unadmitted intentions and bungling may impose obsolescence not only on direct MNC/government bargains, but on any economic relationships to which government policies pertain. MNCs' anticipation of such events influences planning, decisions to act and at times, to refrain from action. Governments' abilities to secure cooperative



## Chapter 1

outcomes in strategic interactions with MNCs depend less on negotiating prowess, substantive offers and relative power than on their signaling competence, long-term intentions, and implementation capabilities.

The investigation reported here applied such a perspective. In particular, it discusses indirect host government influence on MNCs through industrial strategies which provide subsidies, loans, loan guarantees, or equity finance to MNCs' potential intermediate and final goods suppliers. Governments tailor these incentive offers to localize and diversify ownership in their domestic economies' international sectors.

Financial incentives may not, in general suffice to secure MNCs' cooperation in industrial strategies, however, even when governments' objectives seem to complement the firms' strategies well. Choices to cooperate with governments involve resource allocation decisions which may foreclose other options. In particular, external sourcing decisions may partially or completely foreclose options for internal production. If cost conditions change to favor internal supply, production remains effectively locked out until MNCs can invest the time and resources necessary to install new capacity. Disruptions to supply lines may cause production losses which ripple through MNCs' systems, and force costly international searches for alternative suppliers. Factors such as these may provide host country suppliers with leverage to demand renegotiations of supply arrangements (ex post recontracting), should their government assistance end. Consequently, if managers perceive that past unexpected public policy changes have frequently damaged their businesses in particular countries, MNCs' responsiveness to the host government's initiatives may decline.

Past survey evidence fuels this conjecture. As the president of a U.S. company's international division commented to Kobrin (1982: 121), "We are

## Chapter 1

willing to cope with harsh rules or even bad regulations, so long as we know what the rules are and that they won't be changed. But give us uncertainty, and then we flee." Uncertainty stokes the fires of skepticism in the business community, which may already be predisposed to suspect that government policies harm rather than help business (Vogel, 1978; Robinson, 1983; 1987).

MNCs may adjust in other ways to perceptions of a government wild card in public-policy-contingent relationships, however, besides limiting their responsiveness. This study provides evidence that political antecedents to ex post recontracting demands can be assessed in advance and subordinated to contractual safeguards such as self-enforcing factors. The study suggests and tests a cross-national, comparative institutional mode of assessment. This mode assumes that organizational capacities at the national level signal countries' industrial strategy implementation capabilities. These capacities reside in networks of national institutions, including the state, political parties, business and labor. These institutions' national attributes provide implications concerning their negative and positive contributions to the political and administrative requisites of industrial strategy implementation.

The study defines industrial strategy implementation capabilities as countries' capacities to create strategies, to implement them and to maintain their essential features over time, despite conflicting domestic political demands. Consequently, as countries' industrial strategy implementation capabilities increase, the prospects for ex post recontracting demands should, hypothetically diminish both of themselves and through the employment of contractual safeguards. The study describes evidence consistent with the idea that governments lead strategy implementation, operating within the domestic power which their state organizations afford them relative to societal institutions. This view incorporates a definition of states as organizations

## Chapter 1

which embody enduring institutional/legal order within their national territories (Benjamin and Duvall, 1985). Governments by definition, serve as relatively transient office-holders.

Comparisons of countries on proposed empirical referents of state and societal attributes suggest two distinct, often successful approaches to industrial strategy implementation exist in the 36 countries studied. The study refers to these as, 1) state dominance and, 2) public/private sectoral collaboration. These approaches arise, respectively in countries where, 1) strong states dominate fragmented societies with relatively weak institutions or, 2) where states collaborate within inclusive, consensual models of democratic decision-making, in which other institutions have a voice. Countries such as Korea, with its large state-owned capitalist sector and history of labor repression and political authoritarianism exemplify the first approach. European social democracies in which labor and business peak associations consult with government in running their economies, exemplify the second. This style of analysis builds upon the political research of Katzenstein (1977b; 1984; 1985) and others (Krasner, 1978; 1984; Olson, 1965; 1982; Benjamin and Duvall, 1985; Skocpol, 1985).

The study hypothesized that empirical referents of both approaches to strategy implementation should associate positively with MNCs' managers' perceptions of government policy stability. The analysis suggests, however, that the non-consensual nature and generally skeletal institutional context of the state-dominant approach may reflect themselves in implementation difficulties as well as ex post political resistance. In public-policy-contingent commercial relationships, MNCs' managers may perceptually offset these infirmities by according greater importance to such factors as suppliers' transaction-specific asset exposures. These factors constrain or

## Chapter 1

eliminate gains to countries from opportunistic policy changes. As a result, they may compensate for deficiencies in any a priori strategic consensus, by eliminating governments' and interest groups' incentives to lobby for ex post changes. Such self-enforcing factors also diminish the relevance of third party enforcement options. This feature may compensate for institutional deficiencies in courts, property rights, and states' past records of policy implementation, enforcement, and stability.

This study's concern with contractual form in MNCs' public-policy-contingent supplier relationships reflects an interest in the efficiency of interorganizational relations, as a separate matter from the social efficiency of underlying resource exchanges. The study did not ascertain the financial value to MNCs of particular incentives, but only the cross-national incidence of supply lines established in response to assumedly positive offers. It then measured cross-national variation in the importance of self-enforcing factors in the pertinent agreements and in managers' assessments of political environmental uncertainty.

The argument assumed that uncertainty erodes the prospective private benefits to MNCs' cost structures of responding to governments' offers. This erosion does not differ except in its institutional cause, from the incentive impairments which lead to any uncertainty-derived market failure. The difference is that government interventions, rather than market forces set the favorable input prices which MNCs face in these circumstances. Terms such as state organizational failure, or state-induced market failure may more aptly describe the phenomenon.

Self-enforcing factors in local suppliers' public-policy-contingent arrangements with MNCs, may offset or entirely reverse these political environmental deficiencies. In such instances host governments fail to

## Chapter 1

directly influence MNCs, but succeed indirectly when subsidized suppliers' transaction-specific asset exposures are taken into account. This pattern of indirect influence fits within Scott's (1987) institutionalist schema for ordering organizations on their power to influence other organizations' structures. Drawing finer distinctions within DiMaggio and Powell's notion of coercive influence (1983), Scott pointed out that states as well as other organizations may impose, authorize, or induce conformity in other organizations within their jurisdictions. These strategic capabilities descend in order of states' power with respect to target organizations. In cases of weak, partial, indirect or ambiguous jurisdiction, states may create conformity by inducing directly-controlled organizations or their elements to provide incentives to indirectly or incompletely-controlled organizations.

MNCs' affiliates fit the latter characterization, because resources critical to their performances (such as R&D) often reside in sister affiliates or other firm sectors outside of particular host states' authority. Several researchers have called attention to this factor, to account for evidence that the obsolescing bargain dynamic in manufacturing industries may favor MNCs rather than governments (See Kobrin, 1987; Gereffi and Newfarmer, 1985; Bennett and Sharpe, 1979). Self-enforcing factors in host country firms' public-policy-contingent supply offers may represent host government tactics to counteract eroding bargaining power, which devalues the risk-adjusted benefits to MNCs from incentives. Should governments withdraw their financial support, these tactics limit local suppliers' discretion to follow suit. These tactics also shift the risk of financial losses in such events onto suppliers.

### **Power and commitment.**

Intuition rebels against the notion that self-limiting behavior can counteract diminishing power to bargain or to do anything else. Yet powerful

## Chapter 1

entities desiring cooperative arrangements with the weak have historically offered hostages to bond trustworthiness (Williamson, 1983). Schelling draws the analogy of an older child who ties one hand behind his back, to persuade younger children to drop their resistance to including him in their games (1960). Less powerful entities may offer hostages as bonds against their capabilities, competences or intentions. Self-enforcing factors in agreements play analogous roles.

In bargaining as in any other undertaking, power defines parties' capabilities to overcome resistance. Powerful entities can get others to do things they would not otherwise do (Pfeffer, 1981; Dahl, 1957). When governments induce MNCs to behave in accordance with their plans, they demonstrate institutional capabilities and competences to implement economic strategies. Inducements differ both qualitatively and in degree from coercion, in their implications for governments' power. Like coercion, they erode resistance: but in a process of mutual adjustment rather than through one-sided applications of force.

Mutual adjustment constitutes a volitional, iterative process in which parties choose actions in anticipation of others' reactions. Such a process meets the definition of strategic interaction implied by Schelling (1960). Parties involved in strategic interactions can hasten convergence in this process, by making their behavior more predictable to others. Doing so, in Schelling's terminology demonstrates credible commitment. Where simple contracts fail to create credible commitments, self-enforcing factors such as asset specificity may prove sufficient. In negotiations with MNCs burned in the past by unexpected government policy changes, such commitments may provide the marginal leverage necessary to secure active cooperation in host country economic programs. As attributes of host country commercial relationships,

## Chapter 1

these may transform managers' perceptions of public-policy-contingencies from trojan horses into more credible enticements.

### **1.1 Highlights and limitations of findings.**

This section briefly describes the statistical procedures and data used in this study, to model MNC/host government strategic interaction over public-policy contingent domestic supply relationships. It then highlights test findings and limitations, reported fully in subsequent chapters.

The study describes a structural equation model which includes both indirectly-observed (latent) and directly-observable variables. Latent variables represented managerial perceptions. These were constructed from confirmatory factor analyses of questionnaire items from a field study of managerial perceptions in 111 affiliates of U.S. MNCs in 36 countries and 16 industries. Directly-observable variables represented state and societal institutional attributes, and were operationalized from data of archival record. Chapter 5 and portions of Chapters 3 and 4 report comprehensively on data development, measurement issues, estimation procedure and test results for the variables and full structural equation system.

These procedures broadly supported the arguments summarized in the first portion of this chapter. First, as managerial perceptions of political environments varied across countries in favor of stability, the perceived importance of supplier transaction-specific asset exposures in public-policy-contingent relationships significantly diminished. Second, institutional attributes of both collaborative and state dominant approaches bore a significant association to political environmental stability. Third, institutional attributes associated with state-dominant modes of strategy implementation also bore a significant, positive relationship to the

## Chapter 1

importance of transaction-specific-asset exposures in the public-policy-contingent contracts, as well as to political environmental stability. The results chapters provide considerable detail on these findings and their supporting arguments, as well as on many other findings of less salience for purposes of this introductory chapter.

### Cautionary notes for users.

This study reports robust statistical results of a cross-sectional analysis by country of a combination of survey and archival data. Yet several cautionary notes are best imparted in advance, for the sake of informed reading and application of these findings.

Managers' self-reported perceptions of their affiliates' environments and of relationships with environmental elements lie at the core of the findings. These data could prove systematically biased for many reasons, particularly including perceptual differences among people putatively reporting on the same phenomenon. Perceptual differences can arise from such sources as differences in professional function and national origin. Other problems may arise when researchers' operationalizations of phenomena relate poorly to phenomena as people perceive them (See Cook and Campbell, 1979).

The argument underlying the model assumes that managers behave in a manner consistent with economic theory, by responding to incentives as they perceive them. Economics generally considers prices to signal these incentives and thereby to provide sufficient information for efficient social resource allocation. But the incentives of interest in this research represent non-price phenomena. Theory presented explains firms as organizations which internalize economic activities, when market failures preclude purchasing activities' outputs from outside suppliers (See Coase, 1937; Williamson, 1975; 1985). Market failures take place when prices fail to reflect costs or benefits associated with economic activities (Browning and Browning, 1979).



## Chapter 1

Market failure theories of foreign direct investment generally postulate that MNCs form when international market transaction costs preclude otherwise profitable trade (Buckley and Casson, 1976; Casson, 1979; Rugman, 1981; Hennart, 1982; Dunning 1977; 1988). Most of these costs pertain to writing fully-contingent claims contracts for the exchange, under uncertainty, of particular types of assets. But firms never incur the costs of rejected alternative transaction modes, nor can they explicitly evaluate many of them. MNCs' managers respond to "perceived costs of market failure," when they internalize activities (Dunning 1988: 3). Researchers can observe perceptions only by indirect means.

Two considerations surrounding these issues pertain to the present study. The research investigated circumstances where MNCs' affiliates' managers elected to maintain public-policy-contingent external sourcing relationships. These contingencies represented government interventions which interfered with the price system. These interventions either subverted or improved market efficiency, depending on whether market failures existed before the interventions, and on whether the interventions successfully targeted these failures. This study made no attempt to distinguish between these cases, nor to establish the money value of public subsidies involved.

The study assumed that after choosing locations in accordance with their strategies, MNCs bargain with governments within some strategically-permissible range, to determine divisions of costs and benefits from their affiliates' operations (Robinson, 1983; 1987; Kobrin, 1987). But the strategic limits on this range depend in part on whether MNCs' managers perceive that they can rely on governments to keep their sides of bargains. By implication then, governments can alter an important parameter of strategy -- the bargaining range -- by making themselves more reliable. By

## Chapter 1

reducing uncertainty, states' interorganizational influence capabilities may permit them to induce strategic change in MNCs.

The study assumes that bargains become uncertain when managers perceive a probability that governments will change their terms before MNCs' benefits from a subject transaction match the costs of any non-recoverable investments involved. Where suppliers deploy transaction-specific assets in support of public-policy-contingent relationships with affiliates, they accept a share of such non-recoverable exposures. Affiliates' managers were expected to regard such exposures as important factors where they perceived political environmental instability, regardless of the economic stakes involved.

The absence of any variable controlling for the economic value to affiliates of suppliers' public subsidies, however, leaves some of the study's test results open to alternative interpretations and accusations of statistical bias. In particular, transaction-specific asset exposures may increase in importance as the value of economic incentives (and potential damage from loss) to affiliates increases. Such an alternative interpretation does not compromise the findings which confirm a negative relationship between environmental stability and asset specificity. Nor does it compromise the underlying theory surrounding self-enforcement as an indicator of MNC/host government strategic interaction to attenuate uncertainty. But it does raise questions regarding the interpretation of relationships in terms of the two industrial strategy implementation approaches. These issues receive a complete discussion in Chapters 3, 4 and 5.

Users of the study should also take note of limitations on its generalizability, due to the small size (111) of the respondent group analyzed. Although the figure meets the technical criteria for data analysis using the study's chosen methodology, the sample does not meet standards for

## Chapter 1

random selection (See Cook and Campbell, 1979). As a result, idiosyncracies of individual participants may not average out across countries or industries. In addition, since the respondent group does not represent U.S. manufacturing industry in general, additional research would be necessary to determine the applicability of these findings outside of the industries surveyed.

### 1.3 Conclusion and plan of the study.

This study presents an qualitative exploration, rather than definitive quantification of the phenomena under investigation. It proposes many previously-untested links between data and theoretical concepts which researchers have considered difficult to statistically operationalize. Political institutionalists and business strategists both focus on unique rather than general characteristics of the organizations which they study. Political institutionalists explain outcomes through the comparison of history, law, constitutions and interest representation across diverse political cultures. Business strategists study firm-specific advantages: firms' efforts to beat the competition by doing things differently.

Unique characteristics by definition defy quantification. The research traditions within these fields, employed in this study compound the difficulty. No consensus exists either within or between politics and business strategy concerning valid quantitative representations of transaction costs or political institutional attributes. Validation of the empirical links of data to theory suggested here rests, in some instances only on the match of theoretical predictions to statistical outcomes. Such outcomes require replication before they can be accepted with much confidence. Consequently, the material presented in this study may prove more remarkable for its particularities than its generalizability. Readers will find in the study a combination of characteristics of both case and quantitative research

## Chapter 1

methodologies. In many respects, it is most fruitfully and appropriately regarded as an example of the former.

### **Plan of the study.**

This study explores the issues outlined in this introduction, in five additional chapters. The next chapter discusses the mutual implications of countries' local sourcing strategies and MNCs' international business strategies. In order to do so, it recasts contemporary theories of international business strategy in transaction costs economics terms. Chapter 3 discusses political institutional explanations of countries' industrial strategy implementation capabilities, links them to the literature on international business strategy and proposes archival empirical referents of political and societal institutional attributes. Chapters 4 and 5 discuss the measurement and structural equation models, survey instrument and data, operationalizations of variables, hypotheses and results of statistical estimation and test procedures. Chapter 6 provides a conclusion.

**CHAPTER TWO**

**International Business Strategy, Foreign Direct Investment  
and  
MNC/Host Country Relations**

**2.0 Introduction**

Bargains between MNCs and host governments must surmount inherent instabilities in order to persist. Applied economic theories of bargaining suggest that when negotiating new investments, MNCs can often use their management, technological and capital resources to leverage governments' control over market access (Vernon, 1971; Kobrin, 1987). Host governments correspondingly may offer favorable tax, royalty and other regulatory terms. But as MNCs absorb startup costs, bear initial risks and commit non-recoverable resources to facilities construction, bargaining power often shifts toward host countries. These shifts may alter host governments' perceptions of their countries' best interests. Under these circumstances, governments have often successfully renegotiated contracts, gaining a larger share of the returns for domestic economic agents. Vernon (1971), who with Mikesell (1971) was among the first to apply time inconsistency analytic frameworks to international investment (See Pollak, 1968; Treadway, 1969) called this dynamic, "the obsolescing bargain."

This study examines evidence of a similar dynamic operating in MNC/host country bargaining over public policies implementing governments' industrial strategies. The study supports its argument by investigating the particular case of MNC/host government interaction surrounding public-policy-contingent

## Chapter 2

sourcing relationships between MNCs and host country suppliers. But its implications should apply to any bargains in which governments provide benefits such as financial incentives, in exchange for MNCs' collaboration in host-country undertakings. Host governments may for example, seek to influence MNCs' plans to purchase competitors, enter new businesses or exit from current businesses. Governments may also seek MNCs' cooperation in development initiatives, export promotion, or strategic responses to international shifts in comparative advantage. In such cases, governments may exchange inducements such as tax relief or input subsidies for plant location, supplier choice, production mix or make vs. buy decisions suited to national objectives.

These examples of essentially collaborative interactions appear to lack an essential ingredient of the obsolescing bargain scenario: MNCs' immobile assets do not necessarily become hostages to host governments' demands for zero-sum contract renegotiations. This chapter will argue more generally that the cusp of obsolescence for MNC/host government bargains occurs when MNCs either incur implementation costs as a consequence of changes to their international strategies, or alter their risk exposures and loss functions from externally-generated disruptions to their strategies. These cost and risk exposures may or may not encompass emplacement in the host country or elsewhere of new, transaction-specific physical assets. Indeed, where MNCs agree to externally source inputs in exchange for publicly-funded incentives, their risk exposures to ex post recontracting demands may result from decisions not to emplace assets to internally perform the outsourced tasks. These exposures can include (among other things), investments in structuring intrafirm goods and information exchange networks, foregone opportunities for alternative investments, hedging expenses for maintaining any necessary backup

## Chapter 2

production capabilities, risks of disrupting internationally-decentralized multi-stage production processes, other possible losses of synergy with sister affiliates located elsewhere, and losses of international market share due to deterioration of global competitive advantages, especially in costs. As an implication of applied economic theories of international business strategy, these exposures increase as a positive function of MNCs' reliance on central planning and global system integration.

The classic contributions to the literature on international business strategy describe MNCs' strategies by referring to a bipolar continuum. Along this continuum, environmental responsiveness declines as international integration of activities increases. These views owe their conceptions to Fayerweather's (1969) discussion of the tradeoffs between unifying and fragmenting environmental influences which face international managers. Brooke and Remmers (1970, 1978) described the "open" and "close" control continuum MNCs develop to manage the strategic tradeoff. Doz (1980) distilled this concept to tension between internal economic imperatives and external political imperatives facing firms. Prahalad and Doz (1981) integrated a control continuum into a context of headquarters-subsidiary interdependence: head offices control MNCs' proprietary competitive advantages; subsidiaries control local market access.

The logic of unidimensional, bipolar tradeoffs distilled MNCs' strategic choices to resolving tension between competing corporate orientations: national opportunism and world system integration. Doz defined the choice as one between national responsiveness and global integration. By the mid-1980s, contributors to the literature had converged on Hout, Porter and Rudden's typology of international industries (1982) to categorize international firm strategies as well. In their terminology, MNCs which operate at the extremes

## Chapter 2

of world system integration pursue global strategies. Multidomestic strategies characterize country-centered, nationally-responsive MNCs and domestic firms.

Global strategies differ from multidomestic strategies, because the cost-benefit calculus for local changes differs between these types. Affiliates' divergences from global strategies impose immediate adjustment costs, and continuing system efficiency losses on their MNCs' overall international systems. By the definition of global strategy, these system costs outweigh local benefits from meeting national market opportunities or political demands. Multidomestic strategies on the other hand, operate with flexible linkages among affiliates. Adjustment costs for most changes remain largely confined to local affiliates, which are more likely to have achieved economies of scale and other efficiencies, independently of other system members. Because the consequences of decisions under multidomestic strategies less often escape affiliates to affect MNCs' overall systems, local managers gain discretion vis a vis headquarters, relative to their counterparts in more integrated MNCs. Yet this discretion exists as a matter of degree. It remains a central tenet of contemporary theorizing, that all international strategies restrict affiliates' managers responses to local stimuli, within some delegated range. This range may, in practice prove narrow or broad.

Given these assumptions, as well as evidence to be discussed below, MNCs' responses to host government incentives must fall into two categories. In **Category 1** responses, national affiliates evaluate governments' objectives according to international strategic criteria, taking governments' objectives, but not their financial offers into account. Affiliates will undertake such responses provided they meet one or both of two yardsticks: either they 1) meet international strategic criteria for net benefit to the firm without the



## Chapter 2

government assistance (See Robinson, 1983), or 2) they fit within local affiliates' discretion and capabilities to take actions which have only local repercussions (i.e. do not affect their parent MNCs' overall systems). For example, an affiliate may accept tax incentives to locate a new plant in a government-designated economic development zone. This decision falls into Category 1 if the location meets such criteria as proximity to other operations, workforce availability, etc., and as long as the plants' cost structure would meet strategic criteria if its taxes were normalized. If these criteria are not met, the affiliate could proceed only if international strategy permitted it discretion to expend resources to compensate for any deficiencies. These expenditures might be considered good citizenship costs.

Category 1 responses to government incentives, by definition neither incur costs of international strategic change, nor increase MNCs' exposures to risks of international strategy disruptions. Should a government renege on an offer and replace incentives with administrative fiat, compliance imposes at most a slight opportunity cost on the firm. But it may cost the government something in quality of response. As Lindblom points out, political power over economic activity operates more effectively by inducement than coercion. Market capitalism relies on firms to creatively, autonomously respond to threats and opportunities which prices signal. Governments may command bureaucrats to perform their jobs. But they cannot command businesspersons to maximize profits (Lindblom, 1977).

Category 2 responses take place when MNCs depart from their given international strategies and permit affiliates to take actions which have implications at the systemic structural level. The example of a sourcing decision which faced a pharmaceutical firm in this study, illustrates the difference between Category 1 and 2 responses. An Asian affiliate of the firm

## Chapter 2

received an offer from a state-owned enterprise to supply a particular medication in quantities and on a schedule sufficient to meet the MNC's entire international requirements. Government subsidies to the prospective supplier enabled it to substantially undercut the MNC's own manufacturing costs for the medication. The MNC considered making a Category 2 response to this offer, by accepting its terms and shutting down its own production lines for the drug in three locations around the world. Its final decision involved a Category 1 response. It maintained its production lines, but contracted to source any of its needs in excess of internal capacity through its Asian affiliate, outsourcing from the state-owned firm. In general, Category 2 responses may alter the geographic configurations of MNCs' international activities, their intrafirm goods and information exchange networks, their financial structures, or all of these. They may also preclude alternative opportunities. Unlike Category 1 responses, these actions constitute strategy implementation investments which change the international cost structures and value creation modes which underlie MNCs' competitive advantages.

The two categories of response to governments' inducements differ in their implications for MNC/host government interdependence and for the ex post stabilities of bargaining outcomes. Bargains struck within Category 1 should logically prove relatively stable. Category 1 inducements do not provide governments with compelling sources of leverage in cases of renegotiation: managers regard any financial proceeds of the arrangements as gravy. The actions taken in exchange either meet international strategic criteria on their own merits, or can be dropped without compromising strategy implementation (Robinson, 1983).

Category 2 bargains, however, may provide governments with substantial leverage for ex post renegotiations. Because these responses originate as

## Chapter 2

changes in MNCs' international strategies, they also affect the structures of MNCs' intrafirm goods, information and financial flows. Suppose, for example, that an affiliate switches from internal manufacture of a component, to external purchasing, after receiving a competitive bid from a host government-subsidized domestic supplier. If the government opportunistically replaces such a subsidy with administrative fiat, an MNC's system-wide losses due to diminished international competitive cost advantage may exceed the initial impact on the local affiliate's operating costs.

MNCs can not readily withdraw from domestic commercial relationships affected by such policy changes, because to do so might disrupt physical flows of goods, information or funding vital to the performance of activities located elsewhere. Nor will written contracts which specify governments' policies affecting given supply arrangements suffice to guarantee performance. Governments can not generally be defined as parties to public-policy-contingent contracts, except where these involve direct concessions, government purchase contracts, permissions, or state-owned enterprises. Even in instances where governments can be defined as parties, no superseding authority exists to enforce the contractual terms to which they implicitly assent (Yarbrough and Yarbrough, 1987).

Where supply arrangements' viabilities depend on government incentives, therefore, policy changes could set the stage for contractual renegotiations between MNCs and their local suppliers. Such renegotiations, as in cases of obsolescing bargains over facilities investments, carry a high likelihood of outcomes detrimental to the interests of MNCs. For this reason, the terms of public-policy-contingent contracts become viable planning assumptions only to the extent which two conditions hold. The first condition pertains to the degree to which managers perceive particular governments as reliable. The

## Chapter 2

second pertains to the abilities of contracts to automatically maintain incentive compatibility between the parties, even if governments reduce their contributions.

Governments may find it difficult or impossible to alter negative perceptions of their reliabilities once formed, except with the passage of time. Such perceptions certainly vary among managers (Kobrin, 1982), and may well also vary systematically across countries, political systems, types of policies, industries, and companies. Consequently, industrial strategy implementation which requires the active collaboration of international firms may often depend upon the availability of suitable institutional mechanisms of incentive alignment, such as self-enforcing contracts. As Teece wrote (1986: 41), ". . . in many instances, the governance machinery of international investment must be carefully configured to reduce the likelihood that costly haggling will break out between the multinational enterprise and host country, and also to protect transactions and contracts between independent host-country firms and downstream buyers." This study investigates whether such specialized governance machinery works to offset the impact of perceived government unreliability on MNCs' public-policy-contingent supply relationships in host countries.

This chapter elaborates the argument summarized in this introduction, by placing it in the context of an integrated theoretical framework reflecting recent contributions to the theories of foreign direct investment (FDI theory) and international business strategy. The next section reviews and integrates these two streams of literature. Section 2.3 re-introduces the government and public policy considerations and draws together the different strands of discussion. Section 2.4 presents a conclusion.

## **2.1 Foreign direct investment theory, international business strategy and MNCs' external sourcing**

Multinational Corporations possess innate advantages over the domestic firms which they competitively face, supplant, or pre-empt. Dunning's OLI or "eclectic theory" of foreign direct investment (1977; 1983; 1988) divided these competitive advantages into two categories: ownership (O) and internalization (I) advantages. He further subdivided O advantages into asset- and transaction-related categories. MNCs parlay their ownership advantages with locational (L) factors, to succeed in international competition. Locational factors include access to low-cost input materials (according to national comparative advantage) and to attractive national markets. Internalization advantages determine the organizational forms -- licensor, trader, or direct investor -- which MNCs employ to exploit their ownership advantages in particular countries.

### **2.11 Asset Advantages**

MNCs gain asset and transaction advantages due to international market failures. Asset advantages derive from particular MNCs' control of proprietary technology, managerial talent and scarce natural resources. MNCs' exclusive control over such assets evidences structural market failure due to market power. Most asset advantages meet Caves' (1982) definition of firm-specific intangible assets: technology or organizationally-embedded expertise that firms use to pursue strategies of low cost or differentiation. Low-cost strategies aim to undercut competitors' costs. Differentiation works to enhance products' values to consumers and command higher prices through refinements which fulfill specialized consumer needs (Porter, 1986).

### **2.12 Transaction Advantages and Internalization.**

Transaction advantages refer to MNCs' abilities to surmount international market failures due to high costs of contracting, especially for trade in information, goods which embody information, and intermediate goods. Firm-specific intangible assets consist in information, often embodied in intermediate inputs to some production process. Examples include patents, managerial know-how, unique features of organization structures, and proprietary production as well as marketing techniques. Firms owning such advantages may profit from them internationally through trade, licensing or investing in affiliates as intrafirm trading partners. Internalization takes place as MNCs take the latter course: they internally coordinate the exchange of such goods within and among their international affiliates. International coordination, like international trade distinctly challenges managers. MNCs' transaction ownership advantages reside in their ownerships of international goods, information and funds exchange networks which they construct to manage this task.

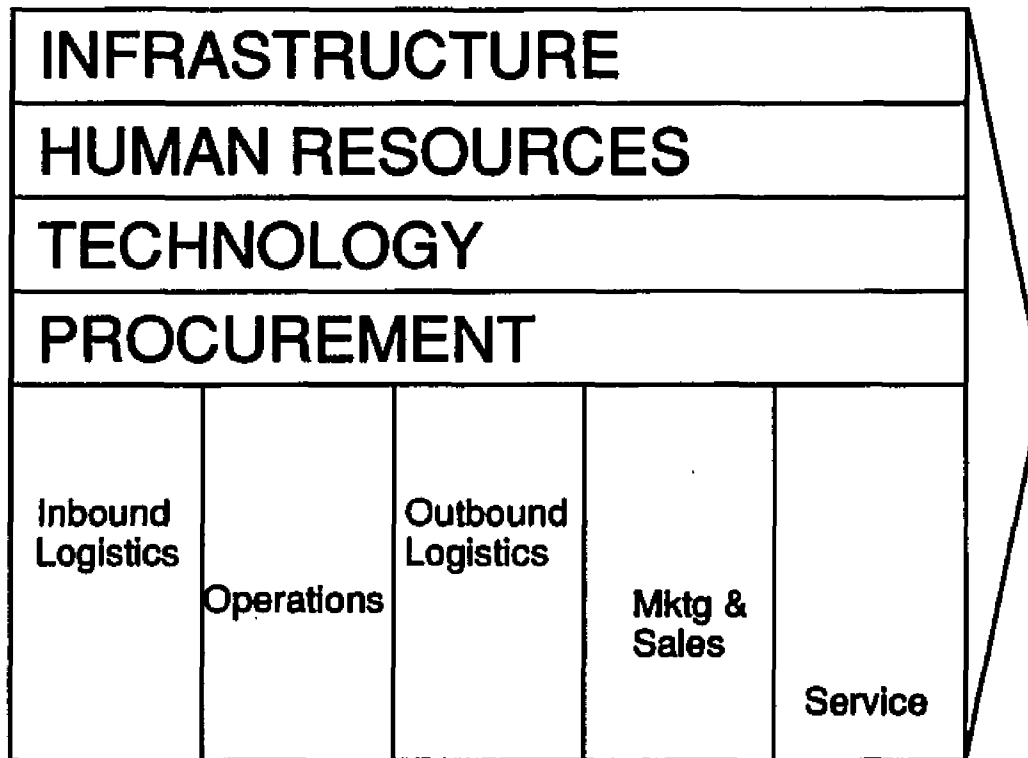
Transaction ownership advantages exist, therefore as properties of MNCs' organization structures. Internalization advantages exist as properties of the coordinative processes which managers undertake within the capabilities these structures afford them (Murtha, 1986; Dunning, 1988: fn).

### **2.13 The Value Chain**

In order to clarify these points, it helps to think of firms' organization structures as manager-coordinated networks of linked interdependent production activities. Business strategy researchers call this analytic tool a value or value-added chain (Porter, 1985; Kogut, 1985a). Figure 2.1 illustrates Porter's generic value chain. Value chain analysis represents firms'

## Chapter 2

structures as unique value activity combinations, and disaggregates them within these categories. Analysts may extend the value chain model to MNCs by



**Figure 2.1: Porter's Value Chain Model as first presented in his 1985 volume, and extended to international settings in Competition in Global Industries (1986).**

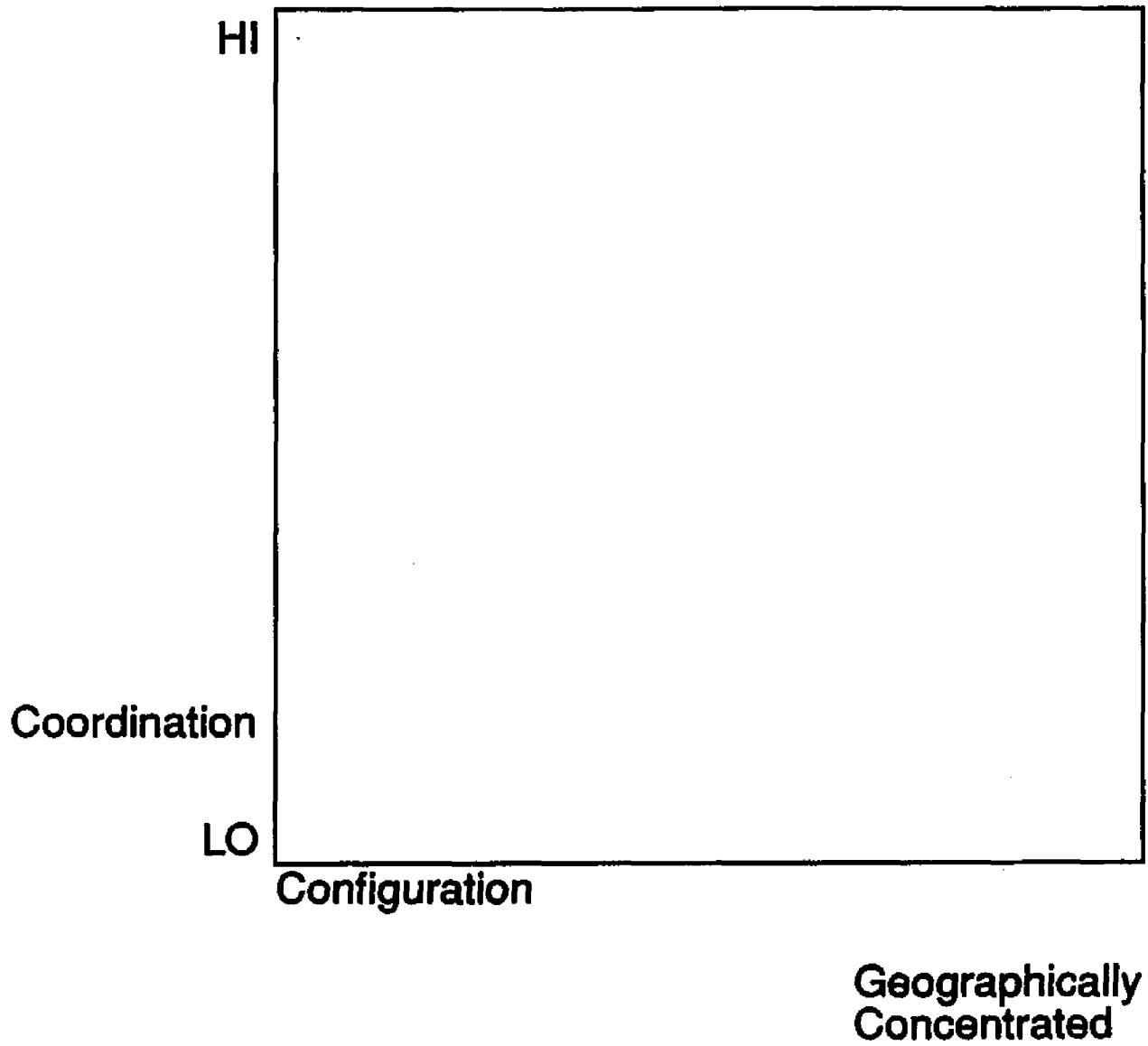
adding a geographic dimension. Value chain analysis of competitive advantage for given companies ascertains the activities which contain final product differentiation or cost reduction opportunities. These opportunities partly depend on selecting appropriate country locations in which to conduct the activities, according to criteria of national comparative advantage and market characteristics such as size or demographics (Kogut, 1985a). Market characteristics influence differentiation opportunities, particularly where these reside in downstream activities such as distribution or marketing.

## Chapter 2

Market size may also influence cost leadership by determining the most appropriate locations for plants of efficient scale. Comparative advantage, combined with scale and technological characteristics of activities, always influences cost leadership opportunities.

In Porter's definition, global competitive strategy entails coordinating among value chain activities which have been geographically-dispersed or concentrated in accordance with competitive opportunities (See Figure 2.2). Coordination consists in efficiently managing flows of goods, information and funding in intrafirm trade, control and learning processes (Porter, 1986; Bartlett, 1986; Bartlett and Ghoshal, 1987a; 1987b; Prahalad and Doz, 1987). Simple global and multidomestic strategies, respectively correspond to the extremes of minimum and maximum affiliate discretion described in the earliest contributions to the literature on international business strategy (See Section 2.0). Simple global strategies centralize value chain activities, particularly upstream, and rely on high coordination. Shipbuilding exemplifies an industry in which global strategies predominate, as even marketing and service can be centralized and operated out of head offices from which principals can travel. Decentralized, low coordination strategies characterize multidomestic international firms, including purely national companies. Many recent contributions to the literature suggest that international competition's modal evolutionary path drives MNCs' strategies toward intermediate positions between these extremes (See Porter 1986; Kogut 1985a; 1985b; Bartlett & Ghoshal 1987a; 1987b; Bartlett, 1986). These positions in the upper left of Figure 2.2, characterize MNCs which pursue the geographically-decentralized, highly-coordinated complex global strategies which Bartlett (1986) calls "transnational."





**Figure 2.2:** Porter's framework for the analysis of international strategy (1986).

## Chapter 2

Transnational strategies, as Bartlett (1986: 382) defines them, aim at "cross country coordination of national operations . . . to capture the scale economies beyond those that can be supported by a single market, while simultaneously retaining the ability to respond to national interests and preferences." Transnational strategies achieve this combination of national responsiveness and global integration by disaggregating activities, including intermediate goods production and dispersing these to their affiliates. These MNCs achieve specialization gains from affiliate scale and learning efficiencies gained producing goods for global internal markets.

Complex global strategies cultivate the organizational capabilities which Vernon (1971) predicted would characterize MNCs of the future, when "stimulation to the system could come from the exposure of any element in the system to its local environment, and response could come from any part of the system." By maintaining productive facilities in multiple locations with densely-interconnected international coordination networks, complex global MNCs may gain some degree of flexibility to arbitrage production to take advantage of opportunities and avoid threats arising in local markets (Kogut, 1985b; Prahalad and Doz, 1987). But the disaggregation and interdependence which characterizes these organizations also creates multiple exposures to local disruptions with potential systemic impacts.

International coordination in complex global MNCs orchestrates organizational incentives to reward the exercise of local discretion in the interests of the larger enterprise. Translated into Dunning's terms, this entails pressing the firm's transaction advantage to internally trade embodied or disembodied asset advantages in accordance with optimal use of complementary locational factors. Complex global MNCs may to a greater degree than other types, coordinate to "capture the transactional benefits (or

## Chapter 2

lessen the transactional costs) arising from the common governance of a network of these assets, located in different countries" (Dunning, 1988: 2).

### 2.14 Transaction Cost Economics

Activities in firms' value chains occur within firm boundaries, by definition. But firms do not enclose within their boundaries all activities necessary to their operations. Firms purchase other firms' outputs as inputs, (outsource) and sell their products to other firms and to households. Complete depictions of firms' productive processes must include linkages to these firms' and households' value chains. Firms' information, goods and funds exchange networks, therefore span their boundaries to incorporate both internal and external linkages. Internal linkages embody governance through coordination of these organizations' value chain activities. External linkages embody market transactions governed through contracts.

Transaction costs economics provides a model to compare transaction-specific costs to establish and coordinate internal versus external value chain linkages. Arrow (1969) has defined transaction costs as "the costs of running the economic system." Williamson (1985) defines these by analogy, as the economic equivalent of friction in physics. In practical terms, these costs include in part, the expenses of searching for someone with whom to deal; of discovering the properties of what is being sold; of negotiating to agree on price; of writing contracts and of seeing that parties perform in accordance with them. Formally, the methodology of transaction cost economics typically entails anticipating the deviation from zero (the perfect competition assumption), of costs to write and enforce contingent claims contracts covering given market exchanges. These costs are assumed to increase with uncertainty as clauses proliferate to cover the parties'

## Chapter 2

responsibilities under multiple future scenarios. Transaction costs sufficiently high to swamp the profits from a given exchange, cause market failure. In cases of market failure, exchange fails to take place, unless the parties can devise alternative institutional arrangements, to more cheaply coordinate their interdependence. These include organizing joint ventures, entering into contracts incorporating various modes of reinforcing safeguards, and organizing firms.

When managers organize firms, they incorporate activities into firms' value chains, or internalize them. Under these circumstances, coordination costs along internal linkages undercut transaction costs in markets for the same activities' outputs. In Coase's (1937) terms, firms internalize additional activities until their marginal coordination costs for internal production equal their marginal transaction costs for market dealing. For transaction and coordination inputs, this condition defines firms' "efficient boundaries" (Ouchi, 1980). MNCs extend their organizational boundaries across national political boundaries. The efficient boundaries condition holds under simplified conditions, assuming production costs equal between firms and markets for optimal combinations of any inputs to firms' processes. Furthermore, the condition treats internal and external transactions as individual, independent, and substitutable. The theory has not been elaborated to consider circumstances where transactions might be bundled, interdependent, and complementary.

### 2.15 Transaction costs analysis and international business.

As Williamson and Teece (1979) sum it up, transaction costs analysis, "ultimately reduces to an examination of the manner in which human agents cope with complex events in the face of uncertainty." Uncertainty imbues all

## Chapter 2

international commercial dealings, not just those involving intangible assets and competitively-sensitive intermediate goods. Even two-party international trade of substitutable final goods in mature markets usually requires the cooperation of third parties and intermediaries. These include banks to facilitate and guarantee payments as well as insurers, government assistance agencies, brokers and trading companies. All perform services to reduce uncertainty that might otherwise dampen or curtail trade.

Uncertainty becomes insidious under two sets of circumstances. First, assets with properties of public goods, such as information become difficult to price and subject to prolonged negotiation or theft. Second, markets with small numbers of traders offer parties to an exchange few alternatives in cases of unsatisfactory performance. FDI theorists have found the tools of transaction costs economics particularly useful, as international technology and intermediate products markets typically display these features.

Information sellers in any market often tread a fine line between promoting their products and giving them away. If sellers disclose too much, purchasers gain possession of the information without payment. But insufficient disclosure chokes off the transaction (Teece, 1981). Arrow (1951) termed this difficulty the fundamental paradox of information. The paradox raises transaction costs for several interrelated reasons. Buyers and sellers, uncertain about each other's characters, spar over disclosure prior to exchanges. The resulting buyer uncertainty over product characteristics poses obstacles to agreement on price. Both problems create time-consuming haggling. Furthermore, agreements struck with imperfect prior knowledge pose inherent difficulties to ex post enforcement. Ambiguous covenants offer poor grounds for claims of violation.

## Chapter 2

Sellers of information face even greater uncertainty in international markets. States have achieved varying degrees of legislative and enforcement sophistication in patent law. Cultural norms may construe intellectual property as public rather than private assets, particularly where these pertain to merit goods. Even some industrialized countries refuse patent protection to certain products, particularly pharmaceuticals (New York Times, May 13, 1987). Some U.S. officials have suggested that states selectively legislate, extend and enforce patent protection as a non-tariff barrier to foreign trade, investment and licensing (Wall Street Journal, May 26, 1988). Weak enforcement may discourage any of these market entry modes, particularly in high technology industries such as computer software. At the same time, weak enforcement withholds sanction from domestic companies that reverse engineer these industries' products (Wall Street Journal, December 22, 1986; March 1, 1988; New York Times, January 25, 1988).

FDI theory, as applied transaction costs economics, suggests that information flows among MNCs' affiliates through international coordination networks may surmount these obstacles. Common organizational membership among exchange partners harmonizes incentives, curbs such opportunistic behavior as stealing, and more readily excludes third parties. Higher authorities may resolve internal negotiation impasses by fiat (Williamson, 1975). Evidence has supported this logic. Many tests of association between FDI and research and development intensity have sustained hypotheses that information market failures abet MNCs' international expansion propensities (See Pugel, 1981; Bergsten, Horst and Moran, 1978).

Transaction costs considerations often favor internal supply of intermediate goods, whether or not these consist in embodied or per se proprietary information. These considerations fall into two categories. The

## Chapter 2

first category comprises considerations arising as a consequence of characteristics of the intermediate goods, their markets or markets for final goods. The second comprises considerations which arise when the human or physical capital used in production constitute transaction-specific assets.

The first category of considerations arises because production and marketing plans rely on uninterrupted input flows meeting quantity and quality specifications. But unforeseen circumstances may shift the incentives of the contracting parties in an intermediate goods supply arrangement. Negative demand shifts in final goods markets for example, might press purchasers to cut their orders' sizes. Positive shifts might tempt suppliers to trade quality for quantity to serve more customers, or to threaten an auction of previously-contracted allotments.

In such circumstances, switching costs and their own small numbers may shield suppliers from dissatisfied customers' threats to seek alternative sources. Switching costs amount to one-time charges which firms amortize over the life of a relationship with a new supplier or customer. Logically, switching costs determine the limit to transaction costs increases which a firm will accept with an existing supplier or customer. In markets with small numbers, participants must anticipate an increased range of feasible opportunistic behaviors in contractual relationships. This occurs because such markets offer few alternatives to parties disadvantaged in contractual disputes. Small numbers more often characterize contract implementation than bidding processes. First-time open-to-buy declarations may attract large numbers of viable bidders. But winning bidders gain experience fulfilling contracts which creates de facto small numbers circumstances upon renewal (Williamson, 1981).

## Chapter 2

Intrinsic characteristics of international markets create switching costs and small numbers problems particular to these settings. Market size, development level, and local competences limit companies' choices among commercial contacts in given countries. Geographic distance, cultural distance, legal singularities and institutional differences perplex customer/supplier courtships and ongoing relationships alike. Switching costs across countries necessarily exceed those within countries, for several reasons. Switching internationally involves conducting a search from a distance. In the search, buyers and sellers newly evaluate the factors just mentioned, perhaps for more than one nationality of a prospective exchange partner. In any new relationship, the parties need to reconstruct the enhanced communications or other organizational features designed to compensate for these factors. These factors may help to explain Flaherty's evidence that MNCs find local affiliates invaluable in countries where they sell, source or bid out intermediate materials (Flaherty, 1986).

Small numbers also compound the difficulties which arise under conditions of asset specificity. Asset specificity pertains to investments in assets with applications to particular exchange contexts (Klein and Leffler, 1981; Williamson, 1981a; 1983). By definition, investors cannot recover such outlays by moving the assets to alternative, non-specialized uses. Such non-optimal applications reduce the returns to the assets. Dies for forming body sheet metal to meet specifications of a given automobile make and model year, provide an example.

Assymetrical exposures of transaction-specific assets create leverage for less-exposed parties in bargains to demand redivisions in their favor of the gains from exchange. Williamson's four-cell typology of asset specificity (1979; 1981b) exhaustively categorizes the sources of possible exposure.



## Chapter 2

**Site specific supplier relationships** involve the location of customer and supplier facilities on adjacent sites. If a supplier builds an entire plant to serve a particular customer's needs, **dedicated** asset specificity results. **Technical** asset specificity arises when transacting parties invest in assets particular to a process or product. **Human** asset specificity arises in exchange relationships which persist over time. Employees selling, purchasing or using materials or services exchanged between organizations gain specialized knowledge about the materials or relationships. Some component of this knowledge has no alternative application.

The pervasiveness of transaction-specific assets in the foreign direct investment context contributes fundamentally to the unique character of firm/government relations involving MNCs and host countries. Direct foreign investors by definition invest in site-specific assets, when they install facilities of any kind in host countries. These site-specific assets provide hostages to host country economic agents in demands for renegotiations such as those Vernon described in support of his obsolescing bargain scenario (1971; Teece, 1986). The next section will argue that given Dunning's eclectic theory, the value of the hostage to a host government in prospective re-contracting will depend on two factors. The first factor encompasses the asset value of any ownership advantage encompassed in value chain activities assigned to the affiliate. The second factor encompasses the MNC's systemic investment in strategy implementation, represented by the system-wide opportunity cost of a locally-generated disruption to the firm's international coordination network. Building on this argument, the section discusses a transaction costs economics view of firm/host country relations, in the context of the theories of international business strategy described here.

### **2.3 MNC/host country relations in an international strategic context of transaction-cost-economizing.**

Researchers on FDI have used the comparative institutional methodology of transaction cost economics to explain the existence of MNCs. Dunning's influential OLI or "eclectic paradigm" discussed FDI and MNCs in terms reconcilable to neo-classical industrial organization economics (Caves, 1971; 1982) and its derivative views of business strategy (Porter, 1980; 1985; 1986. This section relies on Murtha, 1986, which reconciled earlier drafts of Porter, 1986 and Dunning, 1988. Dunning, 1988 makes the same point). Porter characterized international strategy in terms of geographic configuration of the firms' value chain and of coordination among these activities. Configuration (centralization vs. decentralization) subsumed Dunning's asset advantages and locational factors. Asset advantages necessarily reside within activities, configured to take advantage of locational factors.

Firms decentralize asset-advantage-related activities depending on their transaction advantages. Transaction advantages refer to advantages MNCs gain from their intrafirm coordination networks' efficiency relative to that of markets and competitors. MNCs use their internalization advantages to align the incentives of affiliates to cooperate in intrafirm goods, information and funds flows within the firms' international networks. Incentive alignment provides networks with advantages where markets fail to meet these firms' perceived needs to "safeguard supplies of essential inputs; to ensure the quality of end products; to guarantee markets; to protect property rights, and so on" (Dunning, 1988: 3). Affiliates act as endpoints, intersections and transshipment points in these networks. Outside suppliers may also act as network endpoints, via their linkages into affiliates' value chains.

Compared to more centralized strategies, decentralization of production activities to national affiliates more broadly distributes and sometimes

## Chapter 2

increases national affiliates' discretion. Decentralized MNCs pursue low-coordination, multidomestic international strategies to the extent that affiliates' production responsibilities encompass sufficient activities to permit them to compete as replicated, autonomous businesses. Affiliates in such MNCs enjoy maximum discretion for responding to governments' demands for national responsiveness. But the self-contained, domestic orientation of affiliates within multidomestic strategies affords governments minimum scope for influence attempts intended to use the MNCs to enhance their countries' international competitiveness.

Decentralized MNCs pursue high coordination, complex or transnational global strategies, to the extent that international strategy restricts affiliates' discretion to a subset of the activities necessary to be viable domestic and international competitors. These affiliates contribute critical resources to their MNCs' integrated international systems, such as intermediate production stages, final product line units, or critical market information. But these affiliates also depend on these same systems for critical resources, such as technology, intrafirm sales proceeds and final goods for their local selling operations. Complex global strategies require that MNCs use their affiliates to balance national responsiveness with international system integration (Bartlett, 1986; Bartlett and Ghoshal, 1987a; 1987b; Prahalad and Doz, 1987). As a consequence, these strategies reduce the relative scope for affiliates' national responsiveness. But because these strategies parcel out the asset sources of competitive advantage and rely on international network coordination, host governments may often target affiliates with policies intended to improve their countries' international competitive positions.

## Chapter 2

Highly-coordinated global strategies which centralize upstream activities in few countries do not distribute affiliate discretion widely. Activities which utilize key competitive assets may be retained in home country operations, or in relatively few world-regional centers. Governments which implement aggressive strategies to foster such centers may gain substantial international competitive opportunities for their countries (See Cho and Porter, 1986 for a consideration of global strategies in the shipbuilding industry).

Assuming that all MNCs maximize global profits net of transaction costs, the firms will not only decentralize key activities, but also purchase their outputs externally, if transactional diseconomies do not overwhelm production costs savings. MNCs arrive at decisions about internal production, external supply, and appropriate contractual forms to govern external relationships, through an implicit transaction cost comparison among these alternative governance modes. This amounts to an assessment of the relative uncertainty associated with each. Production costs being equal, external sourcing relationships exist under conditions where internal and external sources offer equal security of supply, product quality, and protection of ownership advantages, including both asset and transactional advantages.

Under strategies of high international coordination, all host country external sourcing relationships risk competitive advantage, to the extent that affiliate suboptimization can damage international network performance. Consequently, the establishment of such relationships contingent on public policies creates the possibility of an interesting test of transaction cost economics, as a perspective both on MNCs' organization structures and on their relationships with host governments.

## Chapter 2

In implementing industrial development strategies, governments may offer financial inducements such as subsidies to domestic firms, to help them establish supply relationships with local affiliates of MNCs. Such programs presumably enable local firms to match or undercut affiliates' accounting costs of comparable goods obtained in internal production, intrafirm trade, or international trade with unrelated parties.

The public-policy-contingent nature of these local firms' offers to MNCs, however, seems necessarily to detract from their transaction-cost-effectiveness as compared to equivalently-priced non-contingent market offers. As has been discussed elsewhere (See Chapter 1; introduction to the present chapter), this problem arises because governments can not be made parties to any resulting contracts. Even if governments could become parties, sovereignty precludes enforcement of the agreements, as no authority supersedes that of states either within or outside of their national territories (Yarbrough and Yarbrough, 1987). Enforceability offers an admittedly imperfect guarantee of contractual performance (Teece, 1981; Williamson, 1985). Yet legally-unenforceable contracts undeniably contribute to the core circumstances underlying the obsolescing bargain, the impotence of contract law in the international context, and in general represent transactionally-inferior instruments to the enforceable variety.

Despite these infirmities, managers may choose to ignore the political nature of public funding, where MNCs' historic experiences have demonstrated the stability of governments' policy regimes. This amounts to evaluating public-policy-contingent contracts on a cost-net-of-subsidy basis, considering their business merits alone. Yet government policy stability can never be predicted with certainty. Indeed, MNCs' managers may well perceive that unexpected policy changes have burned their affiliates in the past. Theory

## Chapter 2

suggests that as perceptions of uncertainty increase, managers will become increasingly concerned that political or financial opportunities may motivate governments to take advantage of shifts in relative bargaining power.

Theories of MNC/host country relations and business strategy suggest that MNCs may take two approaches to adjusting for perceived uncertainty concerning government financial inducements. The first approach corresponds to a Category 1 response to government policy initiatives discussed in Section 2.1, in which affiliates limit their responses to governments' policies within the constraints imposed by MNCs' international strategies. The second approach corresponds to Category 2 responses, in which MNCs strategically adapt.

MNCs taking Category 1 approaches analyze the strategic implications of adopting a government's preferred course of action, without taking any financial benefits into account. Strategic adaptation imposes short-term costs on MNCs' international systems and requires long-term investments in implementing organization structures. Rational managers will not undertake such adaptations, unless they perceive a reasonable probability of recouping these expenditures. Under uncertainty therefore, financial inducements may not provide a sufficient incentive to persuade affiliates to increase local sourcing beyond the range already permitted within their strategic discretion. This range may be large, as in the case of a multidomestic international strategy. But whether large or small in value, discretionary purchases will not involve goods relevant to the international competitive advantages of either countries or MNCs, because outsourcing such goods would place MNCs' international strategies at risk.

If a Category 1 project gets the go-ahead, benefits derived from the public policies addressed become gravy in a deal which the MNC would pursue on its own merits (see Robinson, 1983; 1987). Accepting such benefits does not

## Chapter 2

necessarily cede bargaining leverage to governments, nor does losing them detract from an MNCs' international strategic viability. Clearly, some local sourcing Category 1 responses may achieve important domestic objectives of governments. For example, governments may signal regional development priorities through tax preferences and service subsidies for infrastructural investments. But from the perspective of industrial strategy, inducements which secure Category 1 responses may gratuitously compensate MNCs for taking actions which they would take anyway as a cost of good citizenship. At best, these may evidence host government miscalculations or hedges against bureaucratic incompetence, as they expend public funds to secure behavior which pure persuasion or regulation might secure more cheaply. At worst, these inducements may evidence corruption on the parts of public officials.

If Governments intend the financial inducements offered under local sourcing programs to deliver net benefits to their economies, they will generally not compensate MNCs for actions they would take anyway. Local sourcing incentives will more generally aim to provide local suppliers with competitive advantages over affiliates' internal production, their intrafirm trade opportunities, or suppliers in other countries. Such aims seek to elicit Category 2 responses, in which MNCs adapt their strategies despite uncertainty, in order to take advantage of opportunities which government collaboration presents.

In order to offer Category 2 responses to incentives, MNCs must adapt the international configurations which embody their asset advantages, the international coordination networks which embody their transaction advantages, or both. Inducements which successfully elicit such structural organization changes must meet two criteria. First, they must match or undercut MNCs' costs of alternative production modes or trade. Second, they must leave MNCs

## Chapter 2

indifferent between network and external linkages as governance modes for the value chain activities involved. As public policy contingencies in themselves raise questions of enforceability in contracts between domestic suppliers and MNCs, uncertainty may necessitate more specialized governance modes than simple contracts in such relationships.

Hirschman (1971), Moran (1974), Bergsten, Horst and Moran (1978), Shafer (1983) and Teece (1986) have all theorized on bonding, insurance, and self-enforcement schemes to compensate for uncertainty in relationships between nationally-owned extractive firms and multinational management service firms as well as downstream customers. Transaction-specific asset exposure creates a form of self-enforcing contract, because owners face incentives to avoid transaction-disruptive behavior which could create a need to redeploy the assets. In small-numbers or bilateral monopoly relationships, however, specific assets offer latitude for both buyers and sellers to behave opportunistically. Assuming the supplier owns the asset, he may threaten the customer with price increases up to the limit of prices charged by non-specialized and therefore more costly supply sources, assuming these exist. The buyer may, similarly, threaten the seller with the loss of his trade. Such an event could turn the specialized asset into a white elephant. Mutual asset exposure may resolve such impasses (Williamson, 1983).

Teece implies that governance structures for relationships between host country economic agents and MNCs should be designed to place burdens of reassurance on whichever parties suffer the least from specific asset exposures in the relationships (1986: 42-3). MNCs suffer some degree of transaction-specific asset exposure due to site-specificity, wherever they undertake direct foreign investments in facilities. When their responses to external sourcing inducements entail strategic adaptation, they also invest in



## Chapter 2

dedicated supplier linkages, and lock in unique permutations among their possible international network configurations. Furthermore, personnel manning supplier interfaces may develop relationship-specific skills.

MNCs have an interest in assuring that the terms of governance arrangements in any supply relationships match the payout periods of transaction-specific asset or strategy implementation investments. Where the financial viabilities of such relationships depend on public policies, the written terms of agreements may, at times fail to provide sufficient assurances. Written contracts in themselves can not assure continued incentive compatibility between parties to public-policy-contingent agreements, in the event of changes in public policy. Political changes do not always hold uncertain consequences for MNCs' interests. But where MNCs' managers perceive uncertainty, they may seek contracts which separate suppliers' incentives to perform from the public policy sources of their firms' incentives to purchase.

Contracts which incorporate credible commitments (Schelling, 1960) may perform the necessary separation (Williamson, 1983). Parties to strategic exchanges involving credible commitments willingly adopt self-limiting postures, to stabilize their relationships. Credible commitments work by making strategic units' reactions to others' actions predictable, and usually unavoidable. Self-enforcing contracts incorporating mutual exposure of transaction-specific assets, exemplify a form of credible commitment in which both parties make investments which will substantially become losses if a relationship disintegrates. They work because both parties understand the inevitable consequences of a violation.

In the present application, supplier candidates using government-financed incentives may find it easier to open MNCs' affiliates, if they can assert

## Chapter 2

symmetry in transaction-specific asset exposure. States may also make their own cases with transaction-specific investments in infrastructure needed to support the development of MNCs' domestic supply networks. In doing so, host states and domestic firms may compensate for any dampening effects on business environments of past inconsistencies in governments' economic policies. The use of innovative transactional governance mechanisms at the interfaces between countries' public, private, domestic and international economic sectors may create the necessary conditions for MNCs to establish domestic commercial relationships which their strategies would otherwise preclude.

### 2.4 Conclusion

The chapter's purpose has been to integrate transaction costs economics theories of foreign direct investment, theoretical frameworks for the analysis of international business strategy, and bargaining perspectives on MNC/host country relations. Although the discussion focused on the particular case of the impact of governments' subsidies on the nature of contracting between input suppliers and MNCs, the main implication of the argument is quite general.

The chapter has argued that the implementation of industrial strategies which rely on MNCs to cooperate with domestic economic agents, critically depends on managers' past experiences with the government. If these experiences include many instances where unexpected public policy changes have damaged firms' interests, managers will be reluctant to encumber their affiliates with commercial ties which if disrupted, could damage performance within international strategy. But governments and domestic economic agents may be able to counteract such tendencies, by designing and implementing appropriate governance schemes to protect contractual relationships between local and international firms.

## Chapter 2

The next chapter examines attributes of state and societal institutions which may influence managers' perceptions of public policy stability. It also considers whether empirical correlates of some of these attributes might predict the existence of public-policy-contingent relationships between MNCs and host country suppliers, and the importance of specialized forms of contract in governing these relationships. The chapter relies on theory and evidence from political science, concerning the influence of national social and political organization on countries' industrial strategy implementation capabilities.

**CHAPTER THREE**

**States, Social Interests, and Industrial Targeting**

**3.1 Introduction**

Chapter 2 concluded with a discussion of firm/state interaction when host governments offer financial incentives to induce MNCs' affiliates' cooperation in industrial strategy implementation. The chapter also described the theories of international business strategy and foreign direct investment, which informed this analysis. Given that international strategies accord all affiliates some measure of discretion to respond to their local environments, MNC/host country interaction over government policies may take two forms. In the first, affiliates limit their responses to governments' inducements within the constraints imposed by MNCs' international strategies. In the second, MNCs relax the constraints which international strategies place on affiliates' local responsiveness. The chapter argued that the second form of interaction can take place only when MNCs expect policies to remain in force long enough to permit them to recoup any investments in strategic adaptation. Where MNCs' past experiences with governments raise questions about governments' policies' reliabilities, special reassurances such as self-enforcing contracts may, nevertheless secure their cooperation.

This chapter relies upon institutionalist research in political science, to guide an exploration of political organizational correlates within countries, of governments' industrial strategy implementation capabilities. The discussion develops the contestable premise that such capabilities should

## Chapter 3

influence MNCs' managers' perceptions of the stability of governments' policies affecting their businesses, as well as the importance managers accord to reassurances in public-policy contingent relationships, to offset perceptions of instability. Institutional analytic traditions in political science draw distinctions among the organizational attributes of states and societies, and explore the interrelationships among these. Analyses in this tradition treat institutionally-embodied norms, rules, standard operating procedures and structural design features as causal elements which contain and shape national political processes (March and Olsen, 1984).

The institutionalist literature seems to offer prima facie promise as a source of explanations for perceptions of political stability and reassurance (as opposed to changeability and risk). By definition, this literature examines the contribution to theoretical explanation, of relatively-less-transient features of political life. Institutional analysis for example, subordinates consideration of office-holders' capabilities and preferences to consideration of organizationally-determined powers and non-temporal values associated with state office. Institutional analysis assumes that state organizations' structural properties persist over time, barring cataclysmic social change. Changes in governments -- groups of politicians who obtain state office -- occur more often (see Krasner, 1978; Skocpol, 1979). But the accumulated state organizational consequences of past governments' actions constrain new governments' capacities for change.

Institutionalist orientations need not, however, preclude an interest in how structures change, nor in the processes whereby decisions get made or preferences aggregated. Rather, it rests on the acknowledgment that institutional attributes both represent and affect process outcomes. For example, the nature of constitutionally-mandated voting rules affects the

### Chapter 3

political party composition of legislatures. Rules which grant a set number of seats to geographic districts will tend to narrow representation to the few most popular parties. Rules which grant seats to parties in proportion to their national popular vote tallies will result in representative bodies of more numerous affiliations (Riker, 1982; Lijphart, 1984).

Implementation of economic strategies once decided, will be affected in part by whether organizational responsibilities for planning and execution reside within the same or differing agencies or branches of government. This will also depend on the institutional details of how the society's members collectively represent their interests to government. In some countries, such as Mexico, an inclusive political party may internalize and reconcile conflicting interests. In others such as the Scandinavian countries, formal associations representing labor and business have a legally-mandated place in governmental process. Yet other countries such as the U.S., may rely upon a combination of constituent control of office holders and upon lobbies which lack official standing. Katzenstein has used the idea of a "policy network," to describe how differing configurations of interrelated social and governmental institutions contributed to variation among industrialized countries' economic strategies during the 1970s (1977a; 1977b). I broaden this idea to refer to variation across countries in the character of lasting interrelationships within what March and Olsen (1984: 741) termed, "political structure." Political structure constitutes "a collection of institutions, rules of behavior, norms, roles, physical arrangements, buildings and archives that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals."

### Chapter 3

Although contributions to the institutionalist literature vary in the organizational scope they consider pertinent to the analysis of a country, they converge in according primacy to the state. Benjamin and Duvall reflect this primacy in their definition of the state as an organization which embodies legal institutional order within national territories (1985). Questions and assumptions concerning states' attributes therefore, reside at the core of institutional political analysis. The most central among these concern states' relative domestic and international autonomy and power.

Domestic autonomy refers to central authorities' capabilities to develop and implement policies on behalf of a national interest which supersedes domestic social interests (Krasner, 1978; Nordlinger, 1981). International autonomy refers to states' capabilities to choose and achieve their objectives in international security and economic matters. As states' national and international autonomy definitionally pertain to their abilities to take independent action, these also delineate fundamental sources of national capabilities to choose and implement economic strategies. States' power defines the limits of their autonomy, as it determines their capabilities to overcome resistance where they encounter it, in either domestic or international settings.

States' autonomy and power also influences their capabilities to reconcile domestic political demands to domestic effects of international political economic change (Skocpol, 1979). International political economic change may result from business competition which creates winners and losers among domestic industries, firms and their workers. Government decision-makers may hope to follow academic prescriptions (see Reich, 1983; Katzenstein, 1984; 1985; Krugman and Obstfeld, 1987) and anticipate winners, compensate losers and reallocate declining industries' resources toward growth

## Chapter 3

sectors. But such prescriptions require institutional capabilities to either resolve or remain aloof from domestic interest group competition over objectives and resources.

The institutionalist theoretical perspective does not reduce to a consideration of states' power and autonomy, however, nor can these two factors fully-explain national strategic capabilities. Neither do these factors' domestic and international variants necessarily track together to create these capabilities. The relative domestic autonomy of a dominant state may imply an undersupply of collective action in a country, so that states encounter few demands from interest groups external to their organizations, little resistance, and little popular support for their initiatives.

If states are defined as embedded in domestic networks of other institutions, however, power need not imply dominance. Industrial strategies may draw coherence and stability from collaboration among interest groups and the state within national structures of relatively-encompassing collective action (Katzenstein, 1984; 1985). If groups representing, for example industry and labor organize large proportions of a population, their interests may closely-approximate the interests of the nation as a whole (see Olson, 1982). Successful industrial strategy implementation in such circumstances arises not from domestic autonomy but from consensus among national social and political institutions which acknowledge their interdependence.

This chapter describes a framework to analyze domestic institutional correlates of host states' industrial strategy implementation capabilities, and how these interact with MNCs' international strategies. The chapter proceeds in five parts. Section 3.2 discusses MNC/host country bargaining dynamics, and how these may affect contractual form in public-policy-contingent relationships between MNCs and domestic firms. Section 3.3



## Chapter 3

describes general determinants and alternative perspectives of domestic political interests impacts on host governments' discretion to make strategic choices. Section 3.4 describes and evaluates an integrated framework for the comparative analysis of countries' political structures and their effects on strategy implementation capabilities. Section 3.5 evaluates several empirical measures of political structural attributes which fit within the framework. It also discusses implications of their characteristics for the issues under study here. Section 3.6 concludes the chapter.

### **3.2 Host states' discretion and MNCs' international strategies**

Countries vary in the historic and constitutional conditions which have characterized their development. Their political structures take shape as a function of these conditions. Characteristics underlying political structures correspond to varying capabilities afforded governments to act independently of their societies. It follows from the definition that these structures and potentials exist independently of political parties which form governments to hold state power at any given time. Yet these embody the impact and experience of individual office holders, cumulated over time. These office holders reflect philosophies, ideologies and historic constituencies of the parties which bring them to power. The autonomy which power vests in current office holders also depends in part, on contemporaneous structures of organized interests within the societies which states govern (Benjamin and Duvall, 1985; Thomas and Meyer, 1984; Skocpol, 1979; Krasner, 1978; 1976; Katzenstein, 1977a; 1977b). Put another way, states' power, national political structures and organizational resources endow officials with varying discretion to make strategic choices.

## Chapter 3

Governments' strategic choices may pertain to domestic economic strategies and structures, and to states' relationships with operating economic agents. Few but the largest states can exercise much influence over the structures of world markets (Krasner, 1976; Katzenstein, 1984; 1985). These factors, plus the limitations on sovereigns' jurisdictions mean that domestic markets, rather than the international economy remain the primary venues where host states' policies can affect MNCs (Nye, 1974; 1983; Keohane and Ooms, 1975; Vernon, 1981). Host states' strategic choices condition their relationships with MNCs, and MNCs' domestic profit opportunities. Where managers perceive that states have strategies which entail relatively stable and coherent sets of policies, managements may evaluate these as conditions on long-run profit opportunities. Public policies which MNCs factor as opportunities into their long-run plans, by definition affect their international strategies and structures.

MNCs face difficulties diagnosing governments' strategies and factoring host public policies into their long-run plans, as bargains between MNCs and host governments must surmount inherent instabilities in order to persist. In pressing policy objectives, host governments face a bargaining dynamic which balances their control over market and resource access, against MNCs' capabilities to reconfigure their networks to secure packages of jurisdictions most favorable to their interests. Prior to making investments, MNCs enjoy the upper hand. But once MNCs undertake investments, absorb startup costs, bear initial risks and commit non-recoverable resources, power shifts to host countries in a dynamic which Vernon termed the obsolescing bargain (1971). Teece (1986) has restated the theory in transaction costs economics terms, as an applied instance of ex post opportunistic demands for recontracting, following deployment of transaction-specific assets. Governments can and do

### Chapter 3

abrogate contracts under these circumstances, reopening issues of taxation, royalties and other regulation. As many extractive MNCs discovered in the 1970s, (Kobrin, 1980; See Harvard Case #174-104 for an example from the copper industry), sovereign states promulgate contract law; but states need not apply such laws to themselves (Yarbrough and Yarbrough, 1987).

Evidence suggests that some of the same factors which influence relative bargaining power in extractive industries also operate in manufacturing industries. Evidence has failed, however, to generalize the dynamic in which relative bargaining power shifts over time from MNCs to host countries (Kobrin, 1987). But the theory as applied in extractive industries outlined a logic of essentially zero-sum post-market-entry interaction, in which governments use coercive power to back up their demands with implicit threats of expropriation. The zero-sum scenario can not reflect circumstances of host government/MNC collaboration which Vernon has suggested will become increasingly typical (1981). Collaboration implies an effort on both sides to structure positive-sum interactions, in which the coercive capabilities of states remain implicit. Collaborative states visibly use influence capabilities of inducement, which political scientists (Lindblom, 1977), as well as institutionalist organization theorists (Dimmaggio and Powell, 1983; Scott, 1988) have sought to discriminate from coercion.

The elements of MNC/host country bargaining theory may require recombination and elaboration to describe collaborative bargaining dynamics. Positive-sum interactions will more likely draw parties into continuous interactions in ongoing relationships. The model therefore, may require extension as Moran (1974) pointed out, to describe instances of repeated bargaining which take place whenever incremental investments are in prospect, and then again, over recontracting once these have been employed. This logic

### Chapter 3

might also fruitfully be applied to interactions of a form other than serial, two-period "before and after" scenarios of incremental FDI. The same dynamic may apply to bargaining which can be initiated by either side, over a variety of issues. Host governments seek to influence MNCs' plans not only to open new facilities, but also to purchase competitors, enter new businesses or exit from current businesses. Governments also seek MNCs' cooperation in development initiatives, export promotion, or strategic responses to shifts in relative comparative or competitive advantage. Rather than resulting in incremental facilities investments, such interactions often result in the receipt of some government inducement such as tax relief or access to subsidized supply sources.

This chapter discusses hypothesized political structural correlates of countries' industrial strategy implementation capabilities, to explore whether their variation affects prospects for integrating MNCs' affiliates into these undertakings. If the answer is yes, political structures must necessarily incorporate institutional features which vary to counteract the innate infirmities of MNC/host country relations identified in the obsolescing bargain scenario. Clearly, government policy stability can never be predicted with certainty. But it is unrealistic to assume that managers do not appreciate the prospect of ex post changes in relative bargaining power, and of sovereign opportunism to take advantage of such shifts. If both MNCs' and governments' officials know the obsolescing bargain model, they can adjust their strategies to take account of it. The dynamic may have gone undetected in Kobrin's study of manufacturing industries (1987), because government and MNC negotiators employed uncertainty avoidance criteria and contractual reinforcement mechanisms to counteract its destabilizing effects.

## **Chapter 3**

The logic presented here suggests that political structural influence on two interrelated factors could bring about such a counteraction. The degree to which political structures display certain features (say, bureaucratic centralization and legislative consensus) may associate with managers' perceptions of political or institutional/legal environmental stability. Second, as asset specificity and sunk costs in strategy implementation characterize any investment within foreign sovereign jurisdictions, MNCs will always address some concern to the potential for recontracting demands. Managers' perceptions of institutional/legal environmental stability in countries, will moderate these concerns. The next section will discuss a framework for analysis of host countries' political structures, to assess their roles in forming managerial perceptions.

### **3.3 Microeconomic choices and political interests.**

States' political structures provide latent capacities for strategic choice and policy-implementation. These choices and policies may manipulate instruments of either microeconomic organization or macroeconomic stabilization. Macroeconomic stabilization instruments encompass the Keynesian tools of national monetary, fiscal and exchange rate policy. These matters do not fall within the scope of this study. Microeconomic instruments are far more numerous and of narrower scope. These aim to affect details of the structures of economic suborganization by households, firms, industries and sectors, and the behavior of these economic units within these structures. Microeconomic instruments also include the tools of commercial policy, including tariff and non-tariff trade barriers. Policies to implement national industrial and regional economic development strategies, exemplify microeconomic instruments.

## Chapter 3

National and regional industrial strategy implementation capabilities vary in their specificity to particular commercial relationships. These may include policies to affect entrepreneurial opportunities, sectoral competition, and the availability and pricing of financing for targeted growth industries. These may also entail special assistance, such as tariff protection for industries which are downsizing, declining, or retooling to catch up to international competition. Industrial strategy implementation may affect the fortunes of interests such as labor in particular industries. These may also entail state involvement with specific businesses, business people, and business activities. For example, state agencies which serve as universal liaisons between all foreign investors and all interested governmental units, serve as relatively general instruments. State-owned business enterprises which control all clearances and sales of some product such as pharmaceuticals, serve as more specific instruments. As these examples indicate, industrial strategy implementation often blurs the boundaries between countries' public and private sectors. In this respect, implementation affects not only economic structures, but also feeds back on the political structures which enable it. Consequently, industrial strategy implementation in any focal time period is conditioned by patterns of implementation which have succeeded in the past.

The existence in countries of policy instrument specificity may associate with either the appearance or reality of concentrated costs and benefits whose incidences on groups in society do not necessarily coincide. As industrial policy instruments increase in specificity, these may take on the political appearance of serving the interests of ever-more-narrow segments of society. Other interest groups may compare these concentrated private benefits unfavorably with their members' individual shares of policies' more diffuse

### Chapter 3

benefits to their national economies. Costs likewise, may appear uneven, and concentrated in their incidences. For example, entrepreneurs in industries not assisted in a government plan may feel the plan progresses at their expense. Competitors to a favored firm may feel deprived. Taxpayers may feel the same, when the costs of such programs fall on the treasury.

Research in the economics of collective political action suggests that as the incidence of costs and benefits narrows along a continuum of government policies, the probability increases that groups will organize to either seek or oppose their implementation (Olson, 1965; 1982; Krueger, 1974). The existence of sizable economic units, such as large firms within affected groups further increases probabilities that such organization will occur (see especially Olson, 1965). Compared to other policies which affect social welfare, industrial strategy implementation may require governments to operate within institutional contexts featuring relatively dense populations of interested, organized, enfranchised political elements. Implementation requires political structures which afford means either to subordinate or to reconcile these elements' objectives to overall strategic objectives. These strategic objectives function as the public interest in this context. For purposes of this study, the public interest represents a normative standard of encompassingness of benefits. Policies meet the standard when the boundaries of groups benefiting, closely approximate the boundaries of society as a whole (see Olson, 1982).

Countries' industrial strategy implementation capabilities may, in theory be applied to policies which meet this standard, as well as to policies which do not. Particular policies may result from domestic business community segments organizing to secure government benefits at the expense of weaker segments and society at large. Some policy instruments and their

### Chapter 3

applications -- for example, granting monopolies to state-owned enterprises -- appear to distribute business opportunities toward governments. These explanations suggest that industrial strategy formulation and implementation most often takes place in unstable contexts of interest group conflict. Yet this characterization seems inconsistent with conceptions of strategy implementation which envision resource allocation in support of long-term objectives.

Furthermore, where industrial strategy implementation must take place with the cooperation of international firms, the underlying dynamic of the obsolescing bargain suggests the necessity of stability. The necessity of stability suggests the efficacy of institutionalist explanations. The fundamental elements of such explanations can be most easily understood by considering the stark contrast of polar extremes: state-centric institutionalist views, and interest-group-centric pluralist views which overlook institutions as causes of political outcomes.

State-centric views suggest that countries' political structures may afford governments autonomy to authoritatively formulate objectives and lead collective action in the public interest, through the organizational apparatus of their states. Krasner (1978) for example, showed in a series of case studies that the U.S. government pursued a transitive ordering of the same encompassing objectives for many years. Benjamin and Duvall (1985) defined states as organization structures which give coherence to governance, and embody national institutional-legal order. Still other conceptions have emphasized states' roles in reconciling domestic politics to international political outcomes (Katzenstein, 1977a; Skocpol, 1979).

Interest group pluralism (See Dahl, 1961 for a seminal statement) provides the most clarifying contrast with state-centric views of public



### Chapter 3

interest determination. Krasner (1984: 226) encapsulates it well in this passage:

"Pure interest group versions of pluralism virtually ignore public actors and institutions. The government is seen as a cash register that totals up and then averages the preferences and political power of societal actors. Government may also be seen as an arena within which societal actors struggle to insure the success of their own particular preferences. The major function of public officials is to make sure that the game is played fairly. If public institutions are viewed as figurative cash registers or as literal referees, there is no room for anything that could be designated as a state as actor with autonomous preferences capable of manipulating and even restructuring its own society."

An important pluralist variant, the bureaucratic politics model (Allison, 1971) views policy as the outcome of struggles among government agencies viewed as interests, or creatures of interests.

The ideal-typical extremes of state- and interest-group-centric perspectives on domestic politics share a common inadequacy. Neither incorporates a mechanism of preference formation adequate to explain either formulation or continuity within countries of action reflecting the public interest. Students of public choice theories and formal voting models have shown mathematically that preference aggregation only accidentally reflects encompassing interests. Olson (1965; 1982) showed that interest groups tend to seek exclusive favors from governments at public expense, when their shares of the costs remain smaller than their benefits. Any policy meets this criterion, which diffuses costs via taxation but concentrates benefits on small groups. Phenomena such as minimum-size winning coalitions, vote-buying, and intransitive aggregate voter preference orderings (Arrow, 1951; Riker, 1962; Tullock, 1959; Mueller, 1979 reviewed this literature.) pervade political life. These sow intellectual seeds of skepticism in regard to

### Chapter 3

democracy and invest authority in the national interest with an ethical patina which neither history nor current events warrant. Important works by Riker (1982) and Lindblom (1977) delineate and respond to these issues.

Authority in the absence of social context, however, offers an equally unsatisfying explanation of national action in the public interest. Krasner (1978), his intellectual forebears among classical international relations scholars (Morgenthau, 1949/1971; Meinecke, 1957), and students of the welfare state (Thomas and Meyer, 1984) and philosophers have all suggested that states' international and domestic power depend on their populations. Hegel (1964) wrote, ". . . we regard a public authority as infinitely strong if it can be supported by a free and unregimented spirit of its people."

These considerations suggest that unidimensional models whether based on state or societal choices, can not completely represent political structural correlates of countries' industrial strategy capabilities. Successful strategies, especially those involving international firms, depend on consistent implementation of policies in the service of long-term objectives. This depends on first, reconciliation and continued quiescence of interest group conflicts where possible and second, on mechanisms for offsetting destabilizing effects on the business environment, where such conflicts prove unavoidable. Models to parsimoniously address these phenomena must minimally contain elements operationalizing state and societal institutional attributes of political structures, and the linkages among these. Katzenstein (1977) and others have used such an approach in several studies. These studies and the commentary which they provoked offer considerable guidance in specifying a model which incorporates the requisite dimensions.

### **3.4 Relational Models of Political Structure.**

Beginning in the mid-seventies, literature in the social sciences began to reflect an interest dormant since the 1930s, in causal characteristics of political and economic institutions in human affairs (See Evans, Rueschemeyer and Skocpol, 1985; Skocpol, 1985; March and Olsen, 1984). In political science and sociology, this interest coalesced especially around states' organizational properties, power and authority. Katzenstein (1977a; 1977b), was among the first to expand upon the apparently monolithic new statist models, to insist that state power be analyzed in relation to that of society. The three-dimensional framework which he pioneered has become known as the relational approach (Krasner, 1984; Skocpol, 1985). Relational models map political structures, using criteria separately reflecting attribute dimensions of states' structural organizational characteristics (e.g., centralization); societies' organizational characteristics and functional differentiation and linkages of state and private sector roles in economic activity. *These models permit comparative analysis of countries, positioning them along a continuum of strength, depending on the relative power of state and societal institutions (Krasner, 1978; Ikenberry, Lake and Mastanduno, 1988).*

#### **3.4.1 States, societies, and their relationships: definitional ambiguities.**

The specific attributes which Katzenstein chose to analyze within his relational model hearkened in terminology to older political and institutionalist scholarship (Toqueville, 1856; Laski, 1921; Avineri, 1972) and to functionalist approaches in the social sciences (Durkheim, 1933; Weber, 1958). Although Katzenstein focused on attributes of centralization for the state and society dimensions, and on cross-sectoral linkages for

### Chapter 3

differentiation, he did not frame his analysis to take much account of existing research traditions which have examined these constructs. Nor did he define his terms to align his thinking with these views.

Consequently, Katzenstein's dimensional attributes were defined unclearly, and left for researchers applying the model to articulate. Katzenstein may have assumed that readers would understand differentiation as the functionalist term for emergence of a state apparatus within the ongoing division of labor in industrializing societies. But his focus on cross-sectoral linkages does not really reflect this perspective. His concern with centralization echoed Weber's (1958). But he did not apply the concept as Weber did, to the bureaucracy. Both Katzenstein's and Krasner's versions of relationalism equated centralization with state strength, indicated by the degree of decision-making autonomy and power concentrated in executive political office. But using this definition caused their valuations of states on centralization to diverge from that of sociological analyses such as that of Badie and Birnbaum (1983). The latter study for example, evaluated the English state as fragmented, in the face of a strong civil society capable of governing itself. But Katzenstein viewed the English state as centralized, due to the overlap of cabinet and parliamentary membership. English society remained class-riven, fragmented and weak in his evaluation.

The meaning ascribed to differentiation seems equally murky. In functionalist theories of political sociology (See Badie and Birnbaum, 1983) differentiation referred to a developmental process of progressive dissociation among political, cultural/religious and economic systems within countries. States emerge at the culmination of political systemic development, as a response to functional needs for overall social integration. Implicit in analyses as diverse as Tilly's (1975) and Strayer's (1970) are

### Chapter 3

parallel processes of political and economic development. As the division of labor progresses in the development of markets and then industrialization, states emerge to perform political functions. States continue this process as they differentiate themselves, forming departments to meet such exigencies as national defense, diplomacy and finance.

Differentiation, so defined might be expected to dimensionally distinguish in interesting ways among industrialized and developing countries and perhaps between Japan's westernizing institutions and their western models. Katzenstein, however, confounded the concept of differentiation with state and societal centralization in discussing the "policy network" linking state actors with social interest groups. Krasner's study (1978) reduced centralization and differentiation to power relationships and linkages between and within the public and private sectors. In later work, Katzenstein seems to implicitly apply his 1977 model, but does not articulate it. His studies of corporatism in Western Europe (1984; 1985), clearly reflected an underlying attention to state, society and some relationship between these (Hicks, 1988). These studies reflected discouragement about finding consistent quantitative indicators of any institutional attributes of the state/society nexus.

Authors in the international political economy literature have variously reacted to the ambiguity of Katzenstein's approaches by elaborating or rejecting them. One common theme framed both as critique (Gowa, 1988; Hicks, 1988) and as elaboration (Bobrow and Kudrle, 1985) applies collective action theory (Olson, 1965; 1982) to explain the underlying mechanisms of the state/society relationship. Olson hypothesized that groups' sizes, inclusiveness and control over incentives affect their abilities to organize. As Hicks (1988: 132) put it, Katzenstein's recent books along with some others "suggest a conception of political structures as collective action structures:

## Chapter 3

a conception of interest organization, state organization, and structured interrelations among interests and the state as crucial conditions for group and societal public action."

The remainder of this chapter uses organization theory, collective action theory, critiques of relationalism, country case studies, and country rankings on empirical measures suggested by theory, in order to arrive at empirical referents of national industrial strategy implementation capabilities which might fit within a relational framework.

### 3.42 Political structural properties of states.

Mainstream sociology provides the definitional material needed to understand Katzenstein's state centralization. Centralized structures process decisions and information hierarchically: lines of authority and communication connect decision-making centers through secondary tiers of subunits, to peripheral subunits in descending order of power (Scott, 1981). Power tends to concentrate at the center. Bureaucratic centralization affects the structures of agencies and branches, reporting relationships of agencies to each other and their communications lines to executive branches. Other terms being equal, greater centralization implies increased state domestic power and autonomy.

Political structures as defined in institutionalist theories fit at best uneasily into rational bureaucratic models of centralization (March and Olsen, 1984). Institutional models credit states' autonomy and power as much to structural persistence as to structural characteristics per se. Structural persistence implies the cumulation of individuals' experiences into formal institutional rules and standard operating procedures (Nelson and Winter, 1982). Rules shape the preferences of governing groups into policy outcomes.

## Chapter 3

Formal rules and procedures' capabilities to shape outcomes imply a departure from rational choice. Yet rational theories of organization suggest that formalization accompanies goal specificity and enhances implementation in decentralized organizations by unifying subunits' expectations and providing coordination means (Scott, 1981).

Several ideas may help to resolve the apparent inconsistency. Rational individual choices do not necessarily aggregate into rational organizational outcomes (Arrow, 1951). Only structured processes of choice can produce consistently rational results from preference aggregation. If individuals choose to abide by rules, they need not abdicate rationality, but only defer to reasonable choices made in the past. Pre-eminence of rules which shape decision-making processes enhances the imperviousness of state choices to shifting political winds. Consequently, countries' political structures may vary in state strength and autonomy as functions of formalization, centralization or both without any assumption of collective rationality.

### **3.43 Interest group structures of societies.**

Katzenstein seemed to define societal centralization as concentration of power and resources among social interest groups. Societal centralization may also arise non-hierarchically if encompassing interest groups or coalitions form. Interest group structures vary toward centralization according to the degrees to which interests organize; the structures of those organizations; the number of interests the organizations encompass plus the degree to which those interests each encompass broad societal segments; and the formalization of relationships among interest groups and linkages among issues.

Societal centralization implies greater governability. Intermediate centralization can imply polarization of the left and right leading to extreme

instability such as typified Colombia in the 1950s, and such countries as El Salvador in the 1980s. Extremely-fragmented societies may prove either compliant and unresisting in the presence of a strong state (Avineri, 1972), or consociational and consensus-oriented in the manner of the small Western European democracies (Badie and Birnbaum, 1983; Katzenstein 1984; 1985 Lijphart, 1984). Consociational democracies rely on "a spirit of toleration and compromise, rather than . . . the principle of majority rule," to resolve political conflicts (Badie and Birnbaum, 1983: 130). Such democracies typically employ proportional voting rules to evenly distribute legislative offices.

#### **3.44 The relationship between state and society.**

Katzenstein used differentiation to describe boundary-spanning linkages between public and private sector elements. The functionalist definition refers to the emergence of a political function as part of a developmental process of institutional dissociation and division of labor in society. The state meets a need for integration which results from these differentiation processes. Low differentiation as Katzenstein seems to use it, could refer either to early stages of political development, or to highly-formalized and institutionalized state-interest group linkages which characterize the corporatist democracies of Western Europe. The latter countries unarguably have reached an advanced stage of political development.

Analysis of differentiation by Katzenstein then, addresses the permeability of public and private sectoral boundaries; interpenetration of sectors; and institutionalization, formalization, and legitimization sources of linkages between states and sectors and states and interest groups. Low differentiation suggests permeable state boundaries and institutionalized



## Chapter 3

linkages which states officially recognize. At the extreme these characterize either corporatist systems of interest representation or single party states which internalize both political and economic power. High differentiation suggests less ease of access to the policy process for interests, which gain legitimacy from their constituencies, not their states.

### 3.45 Case examples from Katzenstein.

In Katzenstein (1977b), state centralization, societal centralization and differentiation delineated eight cells when juxtaposed in a three-dimensional matrix depicting high and low values of each. Figure 3.1 displays these eight

Type	<u>State Centralization</u>	<u>Societal Centralization</u>	<u>Differentiation</u>	<u>Cases from Katzenstein*</u>
I	high	high	high	None
II	low	low	low to high	United States
III	high	high	low	Japan
IV	low	low	high	None
V	low	high	low	Italy
VI	high	low	high	Britain
VII	high	low	low	France
VIII	low	high	high to low	Germany

\*1977

Figure 3.1: Katzenstein's country cases as analyzed according to his attribute dimensions (1977).

cells and some country examples. Katzenstein (1977b) discussed examples of states' policy-making and implementation capacities for only six of these sets of cell values. This section will not reproduce his analysis, but cite well-

### Chapter 3

known aspects of several countries' politics, to help define and establish the relevance of a relational framework in the present research context. These case examples will serve as reference points in a discussion of other empirical measures of state and social structure, later in the chapter.

Figure 3.2 collapses Figure 3.1 into a two-dimensional matrix of quadrants displaying only state centralization and differentiation. Cell A

		Differentiation	
		Low	High
State Centralization	Low	II, V U.S. Italy  <u>(A)</u>	IV, VIII  W. Germany  <u>(B)</u>
	High	III, VIII Japan France LDCs  <u>(C)</u>	I, VI  Britain  <u>(D)</u>

**Figure 3.2: Cases from Katzenstein (1977) analyzed according to his attribute dimensions.**

contains the United States, low on both interest group centralization and state centralization. The U.S. constitution decentralizes governance geographically, and functionally. It reserves power to states, and separates federal powers among court, legislative and executive branches. Free market competition, geographic expanse and diversity of physical and human resources

### Chapter 3

foster societal decentralization. But the U.S. federal government's organizational decentralization opens it to interest group penetration of executive agencies and the legislative branch, strengthening the hands of interest groups (Krasner, 1978). Katzenstein evaluates U.S. state/society differentiation as intermediate. Permeable public/private sectoral boundaries permit officials' career paths to track through both. But interests rely on constituencies, not the state for recognition and legitimation. Figure 3.2 places the U.S. in Cell A, considering differentiation to be low, relative to countries such as Britain; but high, within the category.

Fully-realized low differentiation suggests institutionalized linkages between the public and private sectors. Institutionalized linkages suggest that interest groups gain access to the policy process through state recognition. Representative, planning and sometimes operating bodies organize as joint state/private sector associations, or even as arms of the state itself. Cooperative relationships such as that between Japan's private industry council, Keidanren and Ministry of International Trade and Industry (MITI) ideally typify firm/state relationships under low differentiation. Keidanren encompasses broad social interests (Olson, 1982) by including most of Japan's big business enterprises. This formalized public/private link permits sectoral, industry, or even firm-by-firm economic planning.

Britain exemplifies Cell D, as a centralized and formalized state, highly-differentiated from its decentralized society. Britain's disciplined two-party system, and the concentration of power in the prime minister's office, illustrate centralization and formalization of its state political structure (Katzenstein, 1977b). British society, by contrast, fragments into diverse interests. These include multitudes of self-standing trade and craft unions (often operating within the same plant); and professional divisions,

## Chapter 3

such as that between solicitors and barristers in the law (Olson, 1982). Rules preclude private bankers serving as directors of the Bank of England, an example of high differentiation (Katzenstein, 1977b).

### **3.46 Factors underlying Katzenstein's relational case classifications.**

My analysis of the examples above among others, suggests that four policy formulation factors and three implementation factors underlie the dimensions of the relational model as Katzenstein elaborated it. These influence the efficacy of policy instruments in states' officials' hands:

#### **Formulation of Alternatives**

1. The number, and inclusiveness of interest groups organized in society.
2. The alignment of objectives among interest groups in society.
3. The alignment of interests among elements in the state bureaucracy.
4. The alignment of interests among state bureaucratic elements and social interest groups.

#### **Selection and Implementation**

5. Policy-making capacity and routinization.
6. The speed of the policy process (See Nettl, 1968).
7. The likelihood that policies, once designed, will be implemented.

Figure 3.3 reproduces the eight typological cells of Figure 3.1, this time noting the numbers of factors on which these types, based on a review of Katzenstein's cases, rate high or intermediate. Generally, countries with low differentiation rate well on cross-sectoral alignment and implementation (4,

Chapter 3

7) while high differentiation countries do not. Countries with centralized states operating with low differentiation from centralized societies, rate

	<u>State Centralization</u>	<u>Societal Centralization</u>	<u>Differentiation</u>	<u>High, Intermed. Dimensions</u>
I	high	high	high	1 2 3 5 6
II	low	low	low	4
III	high	high	low	1 2 3 4 5 6 7
IV	low	low	high	3 5 6
V	low	high	low	1 2 3 5 6
VI	high	low	high	3 5
VII	high	low	low	3 4 5 6 7
VIII	low	high	high	1 2 3 5 6

\*1977

Figure 3.3. Katzenstein's cases analyzed for the present author's formulation and implementation dimensions.

high on all factors. Countries with centralized states operating with low differentiation from decentralized societies, rate low on 1 and 2 but may compensate in implementation through authoritarian directiveness made possible by atomization of social interests and low differentiation.

The two types falling into cell C have the highest latent capacities to make and implement strategic choices about their domestic economies. The sources of discretion and the strategy implementation modes reflected in these capabilities differs between the two types, depending on societal centralization. The study will acknowledge these differences by separately analyzing public/private intersectoral collaboration and state-dominant modes of strategy implementation. Collaborational modes emerge where high state and

## Chapter 3

societal centralization combine with low differentiation. This combination implies political structures which although they may be fragmented at grass roots levels, coalesce at their peaks around relatively few associations and coalitions. These associations and coalitions are constituted as participants in decision-making processes in which states derive power as central administrative organs. State-dominant modes of strategy implementation emerge in political structures where few associations have emerged outside the state to constrain or facilitate its strategic choices. The paucity of organized social interest groups may broaden states' discretion to directly organize many aspects of economic life. On the other hand, it may also create impediments to the conduct of microeconomic policy due to a lack of organizations to participate in implementation.

### **3.5 Some observable measures of political structural attributes, compared to Katzenstein's operationalization of the relational framework.**

The relational framework was designed and has been used for comparative case analysis of the domestic roots of differences among industrialized countries in their international economic strategies. But the framework is exploratory, and so far does not readily lend itself to quantification. Due perhaps, to its origin in induction from case evidence, the framework has been stated in terms of single derived constructs or attributes (centralization; linkages) instead of fundamental concepts or attribute dimensions of state, society and the theoretical principles concerning the relationships between them. The constructs chosen are themselves abstract, ill-defined and multidimensional. Narrow semantic formulations in terms of secondary levels of abstraction (centralization, etc.) further obscure the framework, and

### Chapter 3

unnecessarily reduce the field of potential empirical referents for the attribute dimensions. Further study may help to remedy these ambiguities.

More problematically, the relational concepts are also mutually-contingent in their representations, mutually-dependent, and share some of the same empirical referents. These problems arise due to an innate property of the relational context: values on one attribute dimension have no meaning, except with respect to values of attributes on others. Implications drawn from observations on values of any one of the variables, reflect artifacts of having held the others implicitly fixed. Under such circumstances in scientific investigation, observation and observer may become inseparable (Heisenberg, 1972).

This chapter has reported an effort to infer the fundamental concepts of relational theory which underlie Katzenstein's writings, in hope that the framework can be codified into a transferable technology for the prediction of business circumstances. This section, after summarizing the framework in conceptual terms, discusses three directly-observable institutional attribute measures which might fit within the framework and behave statistically in a manner consistent with it. Countries were ranked on these attribute measures, and the rankings assessed in the general terms of the theory, to see whether values on these data corresponded to case evidence concerning their sources and magnitudes of strategic capabilities.

This approach to empirically regrounding the theory displays certain innate weaknesses. To the extent that the attribute measures function in the model as proxies of underlying concepts, rather than as direct observations of phenomena, failures to find a good match of measures to theory may result from either of two sources. Either the framework or the choice of measure could be at fault. The present discussion regards data as direct observations of

## Chapter 3

categorizable phenomena which are attributes of states, societies, or differentiation. Differentiation will be regarded as an attribute dimension reflecting the overlap or separation of public and private sector roles in economic activity. Mismatches of data to expectations generated by the theory will be regarded primarily as opportunities to re-examine and increase our understanding of the phenomena under study. The tentative, exploratory nature of existing statements and studies of relationalism provides no justification for rejecting data on measurement grounds alone. Further development of institutionalist theories of state and society may require that theorists be willing to adjust their thinking rather than their data, when the latter perform in unexpected ways.

### 3.51 Country rankings on candidate empirical correlates of relational dimensions.

Archival data on a number of measures were examined for consistency with Katzenstein's assessments of states' and societies' relative contributions to countries' strategy implementation capabilities. The section will discuss country rankings on three attributes: single-party dominance of the executive branch; central government revenue as a percentage of GDP; and legislative party fractionalization. The first was examined as an attribute within the category of states' organizational characteristics. The second was examined as an attribute of functional differentiation. The last was considered an attribute of societal organization.

The measure to operationalize single party dominance is calculated as:

$$\text{PARDOM} = \frac{\sum_{i=1}^{492} m_i}{492}$$



### Chapter 3

where  $m_i$  represents 1 for every month in which the dominant party held executive office, and 0 for every month when it did not. The "dominant party" is defined for countries as the party which has held office for more months than any other since World War II. Lijphart (1984) documents a number of uses of time proportions, to study duration of governments and government types, as well as cabinet participation. This particular proportion does not have any precedent in my reading of the literature, but was proposed as an indication of the extent to which institutionalized rules, procedures, policies and organization structures have cumulated in states around consistent constituencies and ideologies. Factors underlying values on the meaning of the measure will differ, depending on the political system. In bona fide democratic parliamentary systems, single-party dominance may reflect legislative cohesion and consensus orientation, or a dominant majority. High values on the measure may also associate with single-party and authoritarian systems. This measure can not be interpreted independently of the other two for any given country.

Data were gathered to calculate the measure for a period including the 492 months from January, 1946 through December, 1986. Sources included various references, including daGraca (1985); Day and Degenhardt (1985); DeLury (1983); McHale and Skowronski (1983); Mackie and Rose (1982), and New York Times reports of election outcomes. These referenced legislative histories provided guidance in judging continuities or discontinuities in tenure when parties split, changed names, changed from military to civilian, or otherwise reconstituted themselves.

Table 3.1 presents the countries in the sample, ranked on values of the attribute. The ranks offer both similarities and exceptions to expectations generated by Katzenstein's cases (1977a; 1977b). If the measure

Chapter 3

**Table 3.1:** Countries in the sample ranked on single party dominance of the executive branch. (See text for sources and formula).

RANK	COUNTRY	VALUE	CASES
1	Yugoslavia	1.0000	1
2	Hong Kong	1.0000	2
3	Indonesia	1.0000	1
4	Mexico	1.0000	3
5	Japan	.9614	5
6	South Africa	.9390	3
7	Taiwan	.9045	4
8	Italy	.9045	4
9	India	.8923	1
10	Luxembourg	.8780	1
11	Korea	.8659	2
12	Sweden	.8537	3
13	Canada	.7846	3
14	Australia	.7744	5
15	Belgium	.7419	4
16	Spain	.7276	6
17	New Zealand	.6972	4
18	Portugal	.6890	2
19	Singapore	.6829	3
20	Denmark	.6809	1
21	U.K.	.6138	10
22	Switzerland	.6098	2
23	Germany	.5935	8
24	Kenya	.5630	2
25	France	.5610	3
26	Pakistan	.5528	1
27	Netherlands	.5488	3
28	Ireland	.5467	1
29	U.S.A.	.5366	6
30	Brazil	.5061	7
31	Venezuela	.4837	3
32	Colombia	.4593	1
33	Argentina	.4431	3
34	Zimbabwe	.4045	1
35	Thailand	.4004	1
36	Chile	.3252	1
MEAN	STD DEV	CASES	
.6937	.1705	111	

### Chapter 3

were regarded as a proxy for centralization, and centralization as synonymous with micro-targeting capabilities, it ranks Germany, the U.S., and Japan properly. Britain holds its proper rank relative to the U.S. and Germany, but it is impossible to say whether its position relative to other countries reflects its comparative centralization. But as pointed out above, Katzenstein's evaluation of Britain departs from sociological conventionality.

Italy's rank is inconsistent with Katzenstein's analysis. Katzenstein's analysis emphasized the schism of industrialized north against rural south, and the isomorphic imprint it has left on the Italian bureaucracy, which he terms "decentralized and patronage-ridden" (1977b: 915). But the tenure of the Christian Democratic Party as coalition leader and holder of executive power, belies Katzenstein's evaluation. The party relied for support on a constituency of anti-communist labor and small business. These constituencies became both resources and the beneficiaries of industrial micro-targeting capabilities. Throughout its tenure, the party pursued non-interventionist domestic economic policies. Governments rarely used the sizable state-owned business sector to implement public policy objectives (Katzenstein, 1977b). The party also supported continuing exemptions from taxes and labor laws for firms employing less than 15 people. But the national party also extended its reach to the local level through many regional and municipal governments (where communists also often dominated). Local governments provided industrial parks for small business, often equipped with common facilities such as dining halls for workers. These also improved roads, opened regional research centers and operated vocational schools. These policies reflected implementation of two strategies targeted at the local level. In collaboration with business, the party pursued an ideological goal, seeking to weaken and wall off labor from communist organizers through decentralization

### Chapter 3

of production. These policies also served to slow the disintegration of the rural parishes which provided much of the party's support (Piore and Sabel, 1984). Many small, internationally-competitive domestic firms emerged partially in response to these policies. These firms form subcontracting networks both among themselves and with larger enterprises such as MNCs (See Harvard Case #685-033).

The variable does not rank France appropriately as a proxy of centralization, but its ranking as a reflection of the contribution of state organization to strategy implementation does not belie all evidence. The French State's centralization may have provided micro-targeting capabilities, but these have not necessarily found success in application (Katzenstein 1977b). Instead, these characteristics may be sources of pervasive, lasting bureaucratization in French economic life (Piore and Sabel 1984). The French State has often taken a planning or regulatory approach to domestic economic management, rather than taking steps to improve market mechanisms. The giant integrated firms which it incubated have at times ended up as wards of the state, rather than as international competitors.

Clearly party dominance may quantify attributes of state organizational capabilities which overlap with but differ from Katzenstein's centralization. Yet among many measurable attributes of state organization, party dominance may carry more relevance for MNCs' involvements in industrial strategy implementation, than does state centralization. The attribute bespeaks stability. The practical correlates of this stability may consist of policy restraint or unremitting interventionism. Theories of MNC/host government bargaining and survey evidence (Robinson, 1983; 1987; Kobrin, 1982) both suggest that securing the firms' cooperation depends as much on policies' consistency, as on their character. Consistency may have its basis in state

### Chapter 3

autonomy from domestic political forces, or in collaborative integration among state and societal institutions. These facts can be assessed only in the context of the other attribute dimensions of the relational model, including societal organizational characteristics and differentiation.

The statistic of legislative party fractionalization or  $F$  (Rae and Taylor, 1970), considered together with party dominance may help to discriminate between the collaborative and autonomous bases of industrial strategy implementation capabilities in countries. The calculation of  $F$  follows the following formula:

$$F = 1 - \frac{n}{\sum_{i=1}^n} \left( \frac{\frac{i}{N} (n_i - 1)}{(N - 1)} \right)$$

where  $n_i$  represents the total number of seats received by the  $i$ th party and  $N$  represents the total number of seats in the legislature. This statistic may be interpreted as the probability that two random draws of members from a legislature will belong to different parties. Data for the calculations came from daGraca (1985); Day and Degenhardt (1985); DeLury (1983); McHale and Skowronski (1983); Mackie and Rose (1982), plus New York Times reports.

Table 3.2 ranks the countries in the sample on this variable. High rank on  $F$  tends to reflect the impact of proportional representation rules on election outcomes. These constitutionally-mandated rules award legislative seats in elections to political parties based on the proportions in national electorates which support them. Proportional representation rules associate with tendencies toward multiple-party democracy, which may require the formation of coalitions to install governments and enact legislation. By fostering such a tendency, these systems institutionalize the necessity for consensual approaches to national government. Consensual or consociational (Lijphart, 1984; Badie and Birnbaum, 1983) democracies emphasize power-sharing

Chapter 3

**Table 3.2:** Countries in the sample ranked on legislative party fractionalization (See text for sources and formula).

RANK	COUNTRY	VALUE	CASES
1	Belgium	.8710	4
2	Thailand	.8170	1
3	Switzerland	.8120	2
4	Denmark	.8060	1
5	Netherlands	.7560	3
6	Italy	.7520	4
7	Portugal	.7040	2
8	Luxembourg	.7010	1
9	Japan	.6920	5
10	Germany	.6850	8
11	Sweden	.6820	3
12	Venezuela	.6250	3
13	Ireland	.6120	1
14	France	.6070	3
15	Korea	.6070	2
16	Zimbabwe	.6000	1
17	Canada	.5850	3
18	Brazil	.5850	7
19	Australia	.5560	5
20	Spain	.5440	6
21	India	.5300	1
22	New Zealand	.5260	4
23	U.K.	.5230	10
24	U.S.A.	.5170	6
25	Argentina	.5110	3
26	Colombia	.4960	1
27	South Africa	.4860	3
28	Indonesia	.4740	1
29	Mexico	.4180	3
30	Pakistan	.3670	1
31	Taiwan	.2250	4
32	Singapore	.0270	3
33	Chile	.0000	1
34	Yugoslavia	.0000	1
35	Kenya	.0000	2
36	Hong Kong	.0000	2
MEAN	STD DEV	CASES	
.54761	.20361	111	

## Chapter 3

among interests, in contrast with the winner-take-all implications of majoritarian systems. Single-member district plurality and majority rules favor two-party systems (Lijphart, 1984). Badie and Birnbaum (1983: 130) make these points clear in their discussion of consociational democracies as:

" . . . political systems in which conflicts are resolved through negotiation and groups with different points of view settle their differences in a spirit of toleration and compromise rather than by application of the principle of majority rule. Such systems are found in societies with deep religious or ethnic divisions, as a result of which the number of opposing political groups is large. . . . This sort of 'vertical pluralism,' arising from the existence of a number of cultures within a single social system, requires equal representation of all groups as the only possible way of avoiding total breakdown."

In Olson's terms (1982), interest groups in consensus democracies must often behave to support encompassing rather than parochial goals. Consensus democracies display many of the same characteristics as Katzenstein's democratic corporatist European states, in particular a national "ideology of social partnership," and "voluntary and informal coordination of conflicting objectives involving continuous political bargaining among interest groups, bureaucracies and political parties" (Katzenstein, 1984, 32-33). Indeed, out of five of Katzenstein's cases from the 1984 study in the sample, four rank in the top five in Table 3.2.

Among the earlier (Katzenstein, 1977b) cases discussed above, F tends to highly rank the same countries which Katzenstein considered societally-centralized. In this category, electoral rules in Germany and Italy require proportional representation, while Japan's employ a modified version (Lijphart, 1984). France falls relatively lower, while still above the mean; the United States and United Kingdom fall below the mean, also mirroring Katzenstein's findings reflecting centralization.

### Chapter 3

Values for the bottom six countries on the list reflect their status as single or near single-party states; or in Kenya's case, as a country for which no information was available. These represent cases where ruling parties impose legislative composition by military, constitutional, or colonial means. These circumstances may convey information about state dominance, but not necessarily about social interest group structures. Certainly Singapore, Taiwan, Yugoslavia and Kenya represent multi-ethnic societies in countries controlled by strong central governments.

Consideration of these cases even heuristically, points out a clear distinction between the party dominance and F attributes in the composition of high ranks, and a relationship between the two measures. In general, countries which rank highly on party dominance by virtue of having single party, authoritarian or colonial states, rank low on F. Countries which rank highly on party dominance by virtue of coalition dominance within parliamentary systems tend to be consensual democracies in industrialized countries. In general, the country ranks on the two measures are uncorrelated by the Spearman method ( $-.15, p=.372, n=36$ ). If high rank on either but not necessarily both associates with industrial strategy implementation capabilities, the precise nature of these capabilities seems likely to differ between the lists, along lines dividing the developed and developing countries. The differences seem consistent with explanations that discriminate between state-dominant and intersectoral collaborative planning and implementational modes.

As an attribute representing functional differentiation of states from their societies, the study examined central government revenue as a percentage of GDP. Using this statistic as an attribute of this dimension implicitly draws an equivalency between central government revenue and the extents of



### Chapter 3

states' roles in domestic economic activities. High rank, by this argument is an attribute of low differentiation. But this interpretation may be inappropriate, depending on whether Katzenstein's or a classical definition is adopted.

Table 3.3 ranks the countries included in the sample on the variable, operationalized from International Monetary Fund (1986b) and World Bank (1986) data. The ranks of both Italy and France seem consistent with Katzenstein's cases (1977b), and other accounts (Piore and Sabel, 1984; Badie and Birnbaum, 1983). Although Katzenstein considered the British political function highly differentiated and the U.S. intermediately so, Badie and Birnbaum classified the British and U.S. cases as relatively-undifferentiated "government by civil society." The statistic converges with Katzenstein's analysis, but not with that of Badie and Birnbaum.

The country rankings on central government revenue correlate highly with legislative fractionalization, (.46,  $p=.005$ ) and not at all with party dominance (-.15,  $p=.36$ ; both Spearman correlation coefficients,  $n=36$ ). Clearly, high rank on central government revenue associates with industrialization. Low rank tends to be an attribute of the developing countries in the sample, with notable exceptions for Japan, and the federal systems of Canada and the United States. In these instances, the attribute provides a reliable indicator of functional decentralization in governments. The appropriateness and meaning of this statistic as an attribute of state/society differentiation depends on the definition of the phenomenon represented by this dimension. Historical evidence suggests that in the formative period of the state in Western Europe (See Tilly, 1975; Ardant, 1975; Braun, 1975), the emergence of capabilities to extract revenues from a population associated with increasing differentiation within a process of

**Table 3.3:** Countries in the sample ranked on central gov't revenue as a percentage of gross domestic product (See text for sources).

RANK	COUNTRY	MEAN	CASES
1	Netherlands	52.8100	3
2	Luxembourg	47.1700	1
3	Belgium	44.2700	4
4	Ireland	42.7300	1
5	Italy	42.4400	4
6	France	41.8600	3
7	Sweden	40.8700	3
8	U.K.	37.7900	10
9	Denmark	36.7100	1
10	Portugal	32.2400	2
11	New Zealand	34.1600	4
12	Singapore	32.4900	3
13	Zimbabwe	31.2100	1
14	Germany	29.4000	8
15	Chile	27.7400	1
16	Australia	27.0800	5
17	Venezuela	26.4500	3
18	Brazil	26.0300	7
19	Spain	25.9300	6
20	Taiwan	24.6400	4
21	South Africa	23.3700	3
22	Kenya	22.3300	2
23	Indonesia	20.2100	1
24	Switzerland	20.0000	2
25	U.S.A.	19.8500	6
26	Korea	19.3600	2
27	Mexico	18.7900	3
28	Canada	18.6400	3
29	Pakistan	15.7900	1
30	Thailand	15.7900	1
31	Hong Kong	15.4900	2
32	Argentina	14.4300	3
33	Colombia	13.2800	1
34	India	13.1700	1
35	Japan	11.6800	5
36	Yugoslavia	8.1900	1
MEAN	STD DEV	CASES	
28.3856	10.2004	111	

## Chapter 3

political development. This interpretation inverts the meaning tentatively ascribed to the scale. By focusing on intersectoral linkages and overlapping public/private sector functions, Katzenstein places politically highly-developed welfare states in advanced capitalist economies at the low end of his differentiation scale.

Both Katzenstein's and the classical views of differentiation draw attention to states' participation in economic activities. Many high and low ranking countries on central government revenues attribute share the characteristic of state-owned enterprise participation in many key, non-infrastructural domestic economic activities. State enterprise ownership constitutes a limiting case of policy instrument specificity, as it permits governments to use structural elements of their own organizations to implement policies through direct participation in specific transactions. States pursuing local sourcing strategies may thereby address subsidies, financial guarantees or other programs promoting supply relationships between MNCs and domestic firms, through firms in which they hold controlling equity. Consequently, the existence of these enterprises in countries may be positively associated with strategy implementation capabilities.

The arguments in this study (see especially pp. 54-57) suggest that as limiting cases of policy instrument specificity, state-owned enterprises and policies implemented through them must often become magnets of political contentiousness. The literature on state-owned enterprises offers considerable evidence that this implication corresponds to reality. State-owned enterprises have been used as instruments of social policy, to the detriment of profits in industrialized and developing countries alike (ECLA, 1974; Vernon, 1988; Wall Street Journal, September 16, 1988). Others have documented these enterprises' roles in developing countries' governments'

### Chapter 3

efforts to meet national elites' demands for entrepreneurial and managerial opportunities (Duvall and Freeman, 1983; Evans, 1979). Even when "privatized," theory and evidence has emerged to suggest that those in control of formerly state-owned enterprises remain closely-linked with government ministries (Wall Street Journal, September 14, 1988; December 5, 1988; December 9, 1988; January 9, 1989). When state enterprises occupy the commanding heights of their national economies, privatization does not diminish their public-policy relevance. Newly-privatized firms may retain their domestic political salience and maximize fundamentally-unaltered objective functions, long after state divestiture (Levy, 1987).

The state enterprise factor, however, may bespeak a critical difference rather than similarity between high and low central government revenue countries. Clearly, as central governments' revenues increase, compared across countries, the availability of resources and instruments for strategy implementation must also increase. Where governments lack the revenue extraction capabilities afforded by developed state organizations, state-owned enterprises may provide governments with financial flows, borrowing capabilities, and sources of patronage critical to their survival. As central government revenues decline across countries therefore, the scope and importance of state-owned enterprises within governments' policy instrument arsenals may increase.

Central government revenues may provide an important discriminating factor between countries whose industrial strategy implementation capabilities arise in public/private collaboration, and those which must rely on state dominance. Central governments which command substantial revenue flows may use these resources both to intervene in their economies, and to compensate social interest groups damaged or overlooked in the intervention.

### Chapter 3

Compensation must figure in any strategy implementation model which relies on broad collaboration across state and society to direct resource allocation.

Governments with more limited sets of instruments must use what they have to achieve both industrial strategy implementation, and broader social objectives. As Tinbergen showed in an entirely different context (1952), the number of policy instruments available for accomplishing interdependent economic objectives must exceed the number of targets, or success is precluded. Where state-owned enterprises exist alongside a relatively small array of instruments available to a government to address several industrial strategy targets, the government's abilities to stay the course toward any one of these might correspondingly shrink. Instruments may need to be shifted from target to target, to satisfy shifting political priorities. Unforeseen interdependencies among targets may necessitate policy reversals, where the availability of other instruments would serve to address the unforeseen difficulty.

Implementation of policies through state equity-owned enterprises may compound the difficulties which public policy contingencies pose to purely private sector contracts, in any case. First, the combination of the enterprise with, for example a subsidy ties up two policy instruments, instead of one for a single objective, reducing governments' overall freedom of maneuver. Second, direct state involvement not only places contractual enforceability in question, but also raises the issue of these firms' likely reactions to political pressure or change. Private firms may not be as likely to face the pressures of meeting dual public and private agendas.

### 3.6 Summary and conclusion.

This chapter has applied theory from economics, political science and business strategy to discuss host countries' capabilities to influence MNCs to cooperate in national industrial strategy implementation. Based on the fundamental insights into MNC/host country interaction offered by bargaining theory, the chapter has argued that government policy stability plays a critical role in this interaction. The bargaining perspective suggests that MNCs which enter into commercial arrangements in host countries will consider whether any public policies which affect their returns will persist long enough to permit recouping their investments. Where these assessments prove negative, government policies aimed at securing cooperation between MNCs and local economic agents may prove ineffective, in the absence of specialized contracts to secure the commercial dealings in case the policies change.

Institutionalist theories of politics provide frameworks for analyzing national attributes which may associate both with managers' perceptions of policy stability, and governments' capabilities to offset negative perceptions. These frameworks have been termed relational theories, because they are built on the assumption that relative power and the nature of linkages between distinct public and private sector institutions influences the number and acuity of policy instruments available to national governments to achieve strategic objectives.

The chapter analyzed and interpreted countries' ranks on three empirical measures of political structural attributes, reflecting the categories of state organization, societal organization and functional differentiation of state from society. The substance of the discussion demonstrated the difficulties of selecting and analyzing individual attribute indicators for such models. In particular, the nature of these models dictates that little

## Chapter 3

if any meaning be attributed to any one attribute, except in the context of the others included. The discussion implied that as values of legislative party fractionalization, party dominance and central government revenues increase, strategy implementation capabilities should also increase. The hypothetical paragon country of all three attributes would exhibit 1) wealth of resources for spending on programs; 2) multiplicity of alternative policy instruments for accomplishing similar tasks and muffling interactions; 3) consensual modes of political decision-making, leading to a reduction in instances of policy backlash; and 4) an executive history marked by few ideological sea changes, with office holders maintained in power by popular assent and interest coalition.

Few countries in the set investigated in this study display high values on all three indicators. The measures presented here may be taken together and interpreted as attributes of host countries which predict commonalities in strategy implementation capabilities, but differences in approach. The major categories of difference hearken to Katzenstein's 1977 and 1984 studies. Collaborational approaches display many of the characteristics of the paragon country, but are most likely to lack the contribution of the stable executive. State dominant approaches may emerge in countries with stable executives, but where resources, instrument multiplicity and consensual structures are lacking. Dominant states may as a result, more often face political threats to industrial strategy implementation in progress, and possess fewer instruments with which to defuse such objections. Consequently, effective industrial strategy implementation by dominant states may be more likely to associate with specialized forms of contract to offset uncertainty.

Chapter 4 provides a more explicit analysis of differences in the country composition of high-ranking groups on the attributes presented here, and on

### Chapter 3

the implications of these for MNC/host country interaction. It then presents a model to predict the impacts of these political structural attributes on MNCs' managers' perceptions of policy stability and on forms of contracts governing public-policy-contingent relationships between MNCs' and host countries' domestic firms. Chapter 5 presents a statistical test of this model.



CHAPTER 4

**A MODEL OF POLITICAL ENVIRONMENTS, PUBLIC POLICY CONTINGENCIES  
AND MNCs' SUPPLIER RELATIONSHIPS**

**4.0 Overview**

This chapter presents a set of equations, relationships and hypothesized relationships to facilitate a statistical exploration and test of four propositions. These propositions crystallize arguments presented in the first three chapters of this study. Three principal propositions concern the nature and political environmental context of MNC/host government indirect interaction. The fourth concerns the effect of such interactions on MNCs' strategies. Although this study is intended to explore general issues of public/private sectoral interaction, its method of doing so uses the example of states' strategies to encourage MNCs to purchase inputs from local suppliers. The argument turns on the premise that managers' impressions of governments' past records of policy stability critically affect governments' present capabilities to persuade MNCs to accept publicly-funded incentives for local sourcing. Support for any part of the argument depends on showing first that these past impressions have an effect on the forms of contract which emerge to govern MNCs' public-policy-contingent supplier relationships.

This chapter presents a model of four interrelated, simultaneous equations to represent these impressions, and their influence on contractual forms as intermediating variables in strategic interaction between MNCs and countries over affiliates' external purchasing. The chapter also presents a set of hypotheses reflecting the relationships among the variables which might

## Chapter 4

be expected in light of theory as applied in this study. Casting the argument in the form of simultaneous equations anticipates the use of a statistical test methodology known as structural equation modeling with latent variables (Joreskog and Sorbom, 1974; 1979). Chapter 5 presents a more detailed discussion of this methodology. I review its main features briefly here, in order to lend credibility to the accompanying model and hypotheses as a testable structure.

### 4.1 Overview of Methodology

Structural equation modeling with latent variables combines the strengths of two applied statistical traditions within the general linear model: econometric analysis and psychometric measurement (DeLeeuw, Keller and Wansbeek, 1983). The method represents concepts and relationships among concepts as variables in linear equations with constant parameters. These can be statistically estimated with equation error, using multiple regression techniques. The method permits researchers to operationalize concepts as constructs represented by variables which can be either directly- or indirectly-observed. Indirectly-observed variables are defined as latent variables. This approach permits application of statistical test techniques to the study of such phenomena as managerial perceptions.

Although researchers cannot observe individuals' perceptions, they may infer these as constructs represented by sets of theoretically-justified behavioral correlates such as responses to questionnaire items (observable indicators). Indirect observation of the underlying phenomena, however, necessitates the assumption and explicit modeling of measurement error in variables. The method achieves this by operationalizing individual latent variables via confirmatory factor analysis on multiple pre-selected

## Chapter 4

indicators, which theory suggests measure aspects of common underlying constructs. This procedure yields regression coefficients of the indicators on the underlying theoretical constructs or latent variables, and error terms on each indicator.

Contrary to a common impression of this modeling technique, its users submit indicators proposed for latent variables to preliminary parameter estimation and statistical tests prior to operationalization of structural equation models proposed to include them. In particular, reliability statistics must be calculated to test for internal consistency of the indicators chosen for each latent variable (See Bohrnstedt, 1970; Bagozzi, 1980). Estimation of the complete model appropriately follows only upon completion of this procedure.

The overall procedure resembles techniques which use exploratory factor analysis to dimensionalize data sets, derive weights, and construct weighted indices of the dimensions which then serve as variables in regression analysis. But important differences exist. First, in confirmatory factor analysis, the researcher preselects indicators to operationalize the latent variables, according to deductive rather than inductive principles. Second, the operationalized latent variables can be tested for reliability. If the proposed sets of indicators prove unreliable, more reliable indicators may be substituted on an item by item basis. Third, the final estimation procedure establishes error terms on the indicators of latent variables as well as on the equations in the model.

Directly-observable variables use single measurement indicators to operationalize per se phenomena which researchers implicitly assume capable of error-free measurement. Consideration of examples such as firm profits or instrument readings, suggests that circumstances almost never arise to warrant

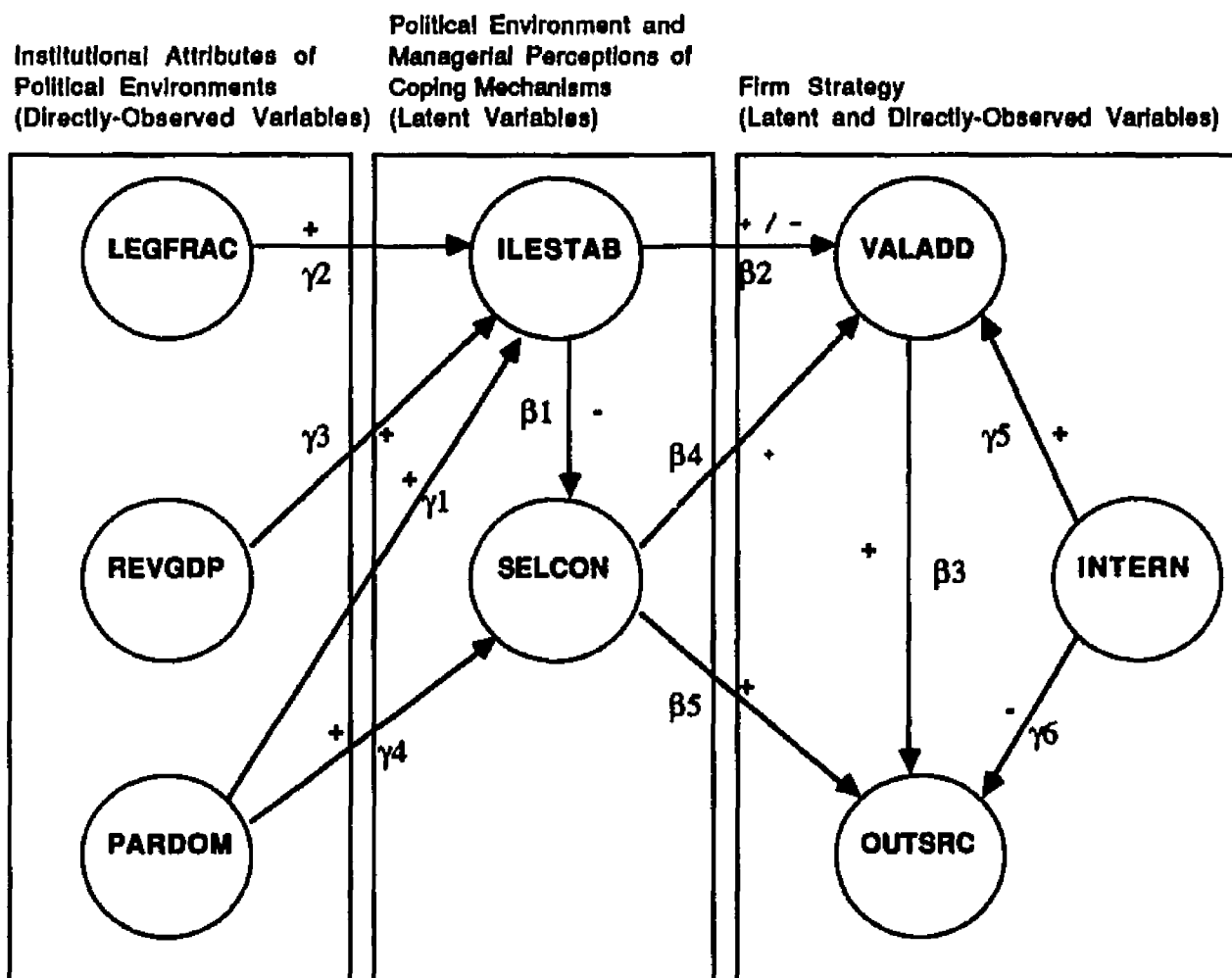
## Chapter 4

this assumption. As a practical matter, directly-observable variables often proxy for broader concepts or complexes of association than they directly represent. Certainly this applies to the research presented here. Readers should regard single-indicator variables with relatively more caution than if these could be represented with multiple indicators, their error parameters estimated, and reliabilities established.

The model presented here presumes the use of both directly-observable variables and latent variables. Directly-observable variables represent objective phenomena in national political economic environments, e.g. central governments' tax revenues. Latent variables represent managers' perceptions of national political environmental stability, and their perceptions of the importance of certain contractual means of coping with commercial relationships in unstable political environments. The theory suggests that managers' perceptions, indicated in the field research by questionnaire responses, arise as a consequence of the directly-observable institutional attributes of political phenomena discussed in Chapter 3 (See Figure 4.1). Model elements representing MNCs' strategies also employ both latent and directly-observable variables.

### **4.2 A Model of Country Capabilities, Perceived Political Environments, and Contractual Form in Public-policy-contingent Relationships.**

This section presents a model of MNCs' affiliates' managers' perceptions of the importance of agreement form or contractual style (as opposed to substance) in relationships with state-linked suppliers. Agreement substance refers to substantive terms of an agreement, such as price, quality, delivery dates, etc. Agreement form refers to the design of the instrumental package containing the terms. For example, verbal contracts differ in form from written contracts. State-linked suppliers benefit from government subsidies,



**Figure 4.1:** Path diagram of structural equation model, depicting variable classifications, expected significant paths and their signs.

loans, loan guarantees, contracts or equity ownership. Governments provide these benefits to firms as part of efforts to implement national industrial strategies to promote MNCs' sourcing of inputs from local suppliers. I refer to MNC/supplier relationships affected by such benefits as public-policy-contingent supplier relationships.

Local sourcing strategies represent a particular example of a general form of domestic economic intervention which relies on states' power rather than market signals to mobilize resources. These strategies may pursue one or

## Chapter 4

more of several objectives. These strategies may aim to create viable international competitors by "leasing the services of (the MNC's) global network" for local firms (Kogut, 1983: 51); to countervail international competitive threats to domestic firms; to promote industrialization; or to limit foreign ownership in countries' international economic sectors. These strategies work by assisting, augmenting or substituting for private sector entrepreneurs (Vernon, 1985; Levy, 1987; 1988; Evans, 1979; Duvall and Freeman, 1983). State assistance generally helps suppliers offer intermediate goods and services to MNCs at more attractive prices than those of alternative national or international suppliers. Some researchers have suggested that these government strategies may also compensate for uncertainty which either prevents potential suppliers to MNCs from starting in business, or renders existing firms unattractive as suppliers to affiliates (Evans, 1979; Duvall and Freeman, 1981).

This study has argued that while public-policy-contingent supply agreements may provide production cost savings to MNCs, the fact of sovereign guarantee or participation does not always reduce managers' perceptions of uncertainty associated with external supply relationships. Indeed in some instances, public policy contingencies may increase rather than diminish uncertainty. For example, Vernon and Levy have documented increases in uncertainty when state enterprises supplant private enterprises in extractive industries (Vernon, 1985b; Vernon and Levy, 1985). The increases arise when state ownership delinks the firms from downstream stages and from multinational resource companies' capabilities to internally arbitrage risk and control flows of product to markets.

This study, however, concerns manufacturing industries. It has argued that state involvement (more broadly defined than equity ownership) may

## Chapter 4

increase uncertainty because state involvements add public policy contingencies or the fact of direct state participation to the normal economic considerations governing supplier relationships. Such contingencies or direct participations raise questions concerning the legal enforceability of agreements between affiliates and state-linked suppliers because governments promulgate, but do not necessarily subject themselves to contract law (Yarbrough and Yarbrough, 1987). Affiliates may, therefore lack recourse to courts of law, should changes in government policies create incentives for state-linked suppliers to violate the terms of their sales agreements with MNCs. I have argued that as a result, affiliates seek extra reassurances of performance in public-policy-contingent supply agreements, when managers perceive that past, unexpected government policy changes have damaged their businesses.

This argument can be stated in the transaction cost economics terms of received FDI theory (Buckley and Casson, 1976; Dunning, 1977; 1988; Rugman, 1981; Hennart, 1982; Teece, 1981; 1986). In these terms, managers price uncertainty associated with non-enforceable public policy contingencies in supply arrangements, as incremental transaction costs of writing fully-contingent claims contracts to cover serial exchanges. Theoretically, affiliates enter such contracts only if their estimates of the transaction costs of researching, writing and enforcing them do not exceed the expected economic benefits of the transaction. In practice, survey evidence suggests that MNCs' managers avoid business arrangements subject to uncertain government policy regimes (Kobrin, 1982; Robinson, 1983; 1987; See Chapter 1). Affiliates will require assurances both as to substance (cost, quality, delivery dates, etc.) and duration of the substantive terms. The literature on MNC/host country bargaining (See Kobrin's 1987 review) suggests that

## Chapter 4

duration may prove particularly unpredictable for agreements involving governments or public policy contingencies. Assurances regarding duration must warrant first, that affiliates can recoup agreement implementation investments over time and second, that delivery disruptions will not force MNCs to make unplanned expenditures to inaugurate or internally start up alternative sources.

Transaction costs logic can predict not only the outcomes of make-or-buy decisions in uncertain environments, but also variations in the structures of agreements governing relationships between input suppliers and customers (agreement form). In particular, contracting parties can allay uncertainties regarding legal enforceability by augmenting the self-enforcing characteristics of agreements. Agreements incorporate self-enforcing factors, to the extent that violations trigger mechanisms which operate automatically and independently of litigation or court intervention, to impose damages on violators. Agreements become entirely self-enforcing when these damages exceed opportunistic gains from reneging on terms. All agreements incorporate some degree of self-enforcement, however, to the extent that disruption carries a cost. This study considers instances where suppliers' deployments of transaction-specific assets augment the innate self-enforcing properties of simple long-term contracts.

Transaction-specific assets by definition, earn suboptimal returns in applications which do not pertain to the particular transactions for which they were deployed. As a result, these assets constitute hostages which bind their owners' performances in relationships, at least for the durations of the assets' depreciable lifetimes. Where such assets pertain to public-policy-contingent supply arrangements, they create incentives for host country firms to maintain relationships with MNCs' affiliates, even if projects unexpectedly



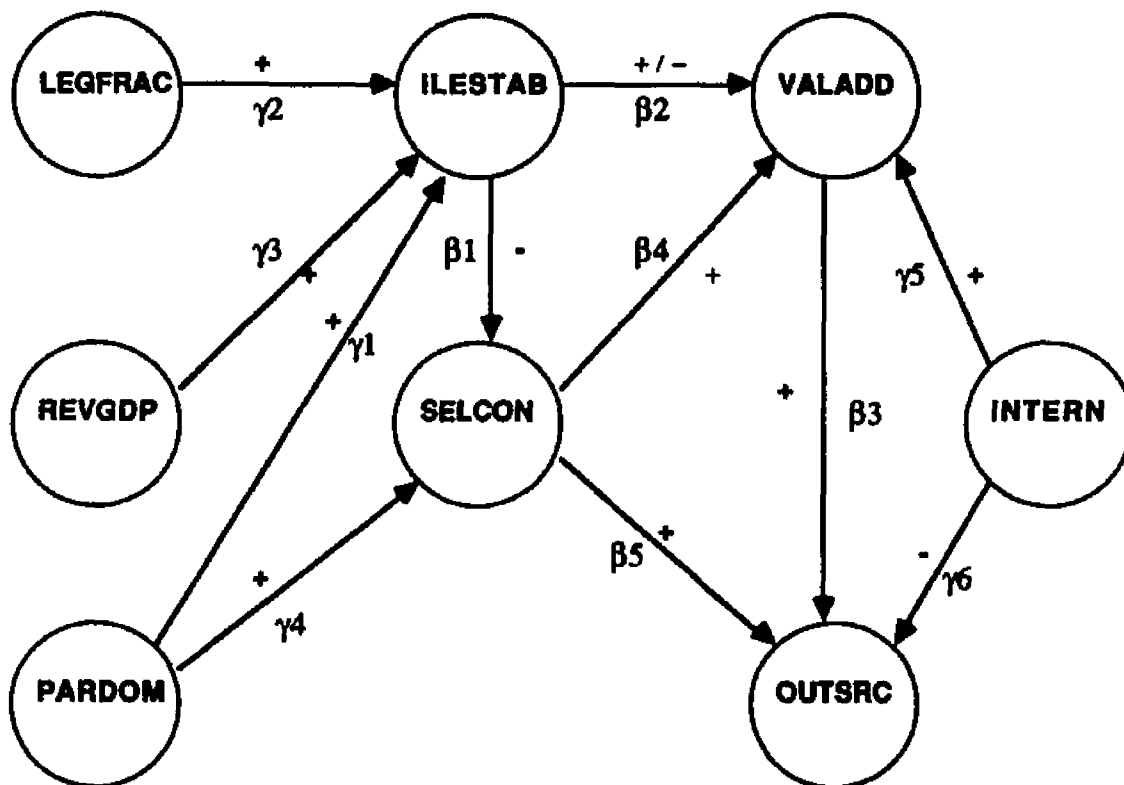
## Chapter 4

lose governments' assistance. The presence of such incentives may diminish managers' subjective probability assessments that public policy changes will compromise the expected economic benefits of public-policy-contingent supply relationships.

If the preceding argument holds true, the importance which affiliates' managers attribute to asset specificity in public-policy-contingent supply relationships will vary with their perceptions of stability in government policies pertaining to their businesses. In a cross-national sample drawn from the general population of MNCs' affiliates, perceived increases in the level of policy stability should associate on average with diminishing attributions of importance to asset specificity in these relationships. In public-policy-contingent supply arrangements entered under limiting conditions of perceived policy stability, innate properties of contracts should be expected to provide sufficient guarantees of enforceability. Agreements in such instances should function as if public policy contingencies were absent. In other words, supplier exposures of transaction-specific assets should not be expected to augment agreement self-enforcement in such cases. This argument, reflecting many of the principal concerns of the study, implies this hypothesis:

- H<sub>1</sub>** (B1) Managers' perceptions of levels of stability in Institutional/Legal Environments (ILESTAB) associate significantly and negatively with the perceived importance of self-enforcing contracts in public-policy-contingent supply relationships (SELCON).

(This hypothesis, like all the others which follow, is stated for ceteris paribus conditions. The parenthetical alphanumeric in each hypothesis references the path representing it on the diagram of Figure 4.2. These will be abbreviated G for Gamma and B for Beta coefficients on the paths.)



**Figure 4.2:** Path diagram of structural equation model, depicting expected significant paths and their signs.

The second set of principal concerns in the study relate to national capabilities to implement industrial strategies. Previous chapters have argued that the managerial perceptions represented by ILESTAB and SELCON reflect the availabilities to governments of policy instruments which can target economic activities at micro levels of analysis. When governments implement local sourcing strategies through financial incentives and self-enforcing contracts between MNCs' affiliates and state-linked suppliers, they target microeconomic activities at the transaction level of analysis.

## Chapter 4

Comparative institutional explanations of countries' international economic strategies have argued that relative state and societal power determine the locus and extent of countries' implementation capabilities. In these theories, governments' capabilities to disaggregate policy targets increase to the extent that organizational attributes of states and societies interact to facilitate one of two implementation approaches. These comprise either 1) public/private intersectoral collaboration or 2) state dominance (See especially Katzenstein, 1984; 1985; also 1977b; Krasner, 1978; 1984; Skocpol, 1985; Benjamin and Duvall, 1985).

Chapter 3 discussed a framework for categorizing countries according to some of the organizational attributes of host polities which might factor in such an interaction. The framework used criteria separately reflecting attribute dimensions of states' structural organizational characteristics (e.g. centralization); societies' organizational characteristics and functional differentiation of states' roles from private sector roles in economic activity. Chapter 3 also discussed directly-observable institutional referents which might fit within the attribute dimensions, and behave statistically in a manner consistent with the framework.

Ideally, separate empirical measures should have been discovered which directly corresponded to representative attributes operationalizing each of these three dimensions. Countries in the sample were ranked on three attribute measures detailed in the chapter: central government revenue as a percentage of gross domestic product (REVGDP); single-party dominance of the executive branch (PARDOM); and legislative party fractionalization (LEGFRAC). Countries with high values on these measures displayed some common features which could explain a common capability to implement industrial strategies. But rankings of the countries in the study on the measures, revealed

## Chapter 4

differences among them in country composition of high-ranking groups. In particular, industrialized democracies dominated the high rankings for LEGFRAC and REVGDP, while the group of high-ranking PARDOM countries proved heterogeneous in both political system and degree of development (See Tables 3.1, 3.2 and 3.3). The latter heterogeneity seemed consistent with a distinction between implementation approaches of state dominance and intersectoral collaboration.

None of the measures met standards of face validity as measures of phenomena uniquely attributable to any one dimension of state organization, societal organization or functional differentiation. The following discussion treats these measures, therefore on their own merits as empirical attributes of host countries which hypothetically predict commonalities in capability, but differences in approach to industrial strategy implementation. I argue, nevertheless that if statistical analysis demonstrates the usefulness of LEGFRAC, REVGDP and PARDOM as predictors, the outcome should be at least partially interpreted as consistent with underlying phenomena fitting within one or more of the attribute dimensions. I now discuss these each in turn.

Legislative fractionalization increases with the number of formal political parties in legislative office. Values at the upper end of the legislative party fractionalization scale generally reflect proportional representation electoral rules. Such rules emerge from and perpetuate the consensus orientation of democratic corporatist and consociational political systems which characterize continental Western Europe and Japan (See Lijphart, 1984; Katzenstein, 1984; 1985). Katzenstein has argued that in such governmental systems, industrial strategy implementation capabilities emerge from intersectoral collaboration in both planning and execution. Examples of factors which foster planning collaboration include peak associations

## Chapter 4

representing labor and business, which conduct institutionalized dealings with government agencies; individual career paths which encompass both public and private responsibility simultaneously or over time; common ties such as schooling, among government and private elite members; and assignment to state-owned or private business enterprises of public planning responsibilities. These ties also foster collaboration in plan execution, as do state equity ownership of enterprises, subsidization and debt or guaranteed-debt financing of the joint or wholly-private ventures on whose activities implementation depends (See Chapter 3).

Industrialized democracies also predominate in the high REVGDP rankings. Central government revenues and debt bear a relationship to government expenditures. Significantly higher per capita central government expenditures characterize industrialized, upper income countries as compared to middle and lower income countries (World Bank, 1988). Expenditures involve governmental operations, investments in national infrastructure and social welfare transfer payments. As proportions of GDP, all three reflect the importance of government relative to private activities in countries' economies. Compared cross-nationally therefore, relatively higher levels of revenue centralization may proxy for lower differentiation of state from private sector economic functions. Lower differentiation may manifest itself in state domination or collaboration with the private sector in strategy implementation.

The more straightforward interpretation of revenue centralization, however, would associate the measure with the state organizational attributes dimension as a measure of centralization. Central government revenue as a percentage of GDP reflects concentration of responsibilities for public revenue collection, appropriation and disbursement which may confer power on particular branches, such as the executive within state organizations. REVGDP

## Chapter 4

may logically reflect the power which these same resources affords central governments relative to local authorities within geographic subjurisdictions of national territories. State organizational centralization confers strategy implementation capabilities by unifying mechanisms for objective formulation, and concentrating authority over resource allocation to meet objectives. Governments thereby gain wherewithal to define and promote preferred modes of private sector behavior through regulatory fiat or financial inducement. More critically perhaps, high revenues may also confer capabilities on central governments to induce industrial cooperation by compensating social groups who perceive their interests to be damaged or ignored.

Unlike legislative fractionalization and revenue centralization, party dominance highly ranks two groups of countries whose members clearly differ in their political systems and stages of industrialization. The first group comprises industrialized democracies with parliamentary systems in which single parties have dominated the executive. In these countries, dominant parties have often internalized factions which nevertheless maintain distinct identities (i.e., Japan), or have remained consistently in coalition with varying constellations of other parties. The second, larger group consists in a number of rapidly and newly-industrializing countries (NICs). In these countries, single parties have dominated as instruments of military, authoritarian or colonial rule, or by institutionalizing comprehensive forms of social interest representation within their organization structures. These explanations of single party rule share a common implication for state organization. All result in concentration of political power on central organs of a powerful executive. This centralization of power also has economic implications. Among the top-ranked eleven countries on party fractionalization, Indonesia, Mexico, Taiwan, India, and Korea have all

## Chapter 4

incorporated state entrepreneurship as an important element in their development strategies (See Frieden, 1981; Amsden, 1985; Gereffi, 1983; Grieco, 1985; Sudararajan and Thakur, 1980).

States implement strategies of entrepreneurship when they attempt to substitute for weak or nascent private sector economic institutions by financing the startup and operation of businesses. Policies to implement these strategies include partial or complete equity ownership of firms and financial institutions, as well as loans, guaranteed loans or subsidies to these same organizations. Policies of entrepreneurial substitution represent one manifestation of states' determination to lead development by blending political prerogative with domestic resource mobilization power. (Gerschenkron, 1962; Duvall and Freeman, 1981; Freeman, 1982). Strategic capabilities in such countries might logically arise from two related factors. First, states may dominate private sector interests in these countries' economic activities. Second, planning and implementing institutions both fall under some degree of common state control. Control of state organizations may thereby imbue governments with properties of unified actors in goal setting and implementation. Association between party dominance in countries and their industrial strategy implementation capabilities may arise, then from attributes reflecting both low differentiation and high state organizational centralization. The association between party dominance and state entrepreneurship suggests that this centralization applies not only to political functions, but also to the economic functions which relatively undifferentiated states reserve to themselves.

Given the association of legislative fractionalization, revenue centralization and party dominance with high industrialization levels, industrialization rates or both, the proposition that these should associate

## Chapter 4

with industrial strategy implementation capabilities may seem too self-evident to warrant investigation. If industrial strategies work, then correlates of implementation capabilities should be expected to associate with high industrialization in developed countries, and high rates of industrialization in developing countries. But this research asks more particular questions. First, it seeks results consistent with differences in strategy implementation approaches among countries. Second, it asked whether theories which predict states' microeconomic targeting capabilities could distinguish whether states can target particular transactions.

The transaction represents the limiting case of disaggregation among observable microeconomic phenomena. In order to target transactions, states must address both economic substance (the nature and price of the goods exchanged), and the form of agreement under which the exchange takes place. In the local sourcing strategy context, issues of substance pertain to the designation of particular suppliers or prospective suppliers to MNCs, for financial or other assistance which permits them to gain sales through price cuts or quality improvements. Issues of contractual form pertain to features of agreements between MNCs and state-linked suppliers which benefit from this assistance.

Hypothesis 1 suggests that strategic intervention at the micro extreme of transactions must associate with a repertoire of contracting styles to suit varying managerial perceptions of relative uncertainty associated with countries' public policies (ILESTAB). Simple contracts represent the least complex and particularized instruments in this repertoire. We should, therefore expect the acuteness of micro-intervention capabilities to positively associate with managerial perceptions of ILESTAB, as stable ILEs pose fewer transactional impediments to contracting processes which



## Chapter 4

governments' local sourcing strategies seek to promote. In light of this, and given the preceding arguments, the following hypothesis should hold:

- H<sub>2</sub>** (G1 - G3) Single party dominance of state executive branches (PARDOM), legislative party fractionalization (LEGFRAC) and central government revenue as percentages of GDP (REVGDP) associate positively with managers' perceptions of institutional/legal environmental stability in countries (ILESTAB), when all of these variables are measured and compared cross-nationally.

This hypothesis implies a general functional relationship among the variables included. For simplicity in presentation, I state this relationship (as well as three others, later in the chapter) as a linear functional form, the transliterated variable names. This choice of functional form anticipates an assumption which will be imposed in the estimation procedure reported in Chapter 5. The  $\gamma_j$  and  $\beta_j$  represent parameter weights to be statistically estimated:

$$(1) \quad \text{ILESTAB} = \gamma_1 \text{PARDOM} + \gamma_2 \text{LEGFRAC} + \gamma_3 \text{REVGDP}$$

By implication of H<sub>1</sub>, as managers' perceptions of institutional/legal environmental stability vary negatively, countries' capabilities to target transactions increasingly depend on coupling substantive incentives with appropriate forms of agreement between state-linked suppliers and affiliates. We should also expect, therefore that some measures of countries' strategy implementation capabilities should associate positively with managers' perceptions of the importance of such agreement forms. The measures included in H<sub>2</sub> associate with a complex of empirical regularities consistent with theoretical distinctions among attributes of state organization, societal organization and differentiation.

These measures self-evidently fail, however, to distill and individually represent the distinct attribute dimensions. Indeed, each attribute may

## Chapter 4

represent phenomena in which factors falling into all three dimensions play an underlying role. Yet despite these variables' multi-dimensionality, differences among them in the members of high ranking groups of countries appear consistent with an explanation recognizing the two distinct approaches to strategy implementation of public/private intersectoral collaboration and state dominance. Broadly, collaboration appears consistent with high rank on either party dominance or central revenues and party fractionalization. Dominance appears consistent with high rank on party dominance alone. I will argue that the implementation approach of dominance should significantly associate with managerial perceptions that self-enforcing contracts play important roles in relationships with state-linked suppliers. Such an approach would be consistent with a positive association between party dominance (PARDOM) and self-enforcing contracts (SELCON).

Agreement forms such as self-enforcing contracts compensate for managers' uncertainty about whether public policies pertaining to their suppliers or prospective suppliers will persist in time. Development scholars such as Gerschenkron (1962), Evans (1979) and others have regarded state power and autonomy as determinants of countries' capabilities to implement industrial strategies in unstable or uncertain environments. This research stream identified state commercial enterprise ownership, and other forms of economic influence including subsidies, loans and loan guarantees as instruments of this autonomous power. Such instruments evidence low functional differentiation of public sector organization and tasks from private sector organization and tasks.

Evans provides a case study of these instruments in action. In Dependent Development, (1979) he described the Brazilian state's ownership participation in the domestic petrochemical feeder stock industry as an example of

## Chapter 4

industrial strategy implementation through governmental uncertainty absorption. State participation not only facilitated financing for the project, but also attracted a constellation of domestic and international downstream chemical processing firms to become customers.

Evans' argument, however, carried an implicit assumption which remained unsupported in his case study. If uncertainty absorption adds any increment of attractiveness to underlying financial incentives to purchase from state-linked suppliers, then states must be inherently more reliable than other economic agents. This study has argued an alternative position that public policy contingencies saddle MNC/local supplier relationships with enforcement uncertainties which in unstable environments require offsetting contractual features. In the Evans case, the Brazilian industry's investments in dedicated and site-specific assets to service customers' adjacent facilities added the necessary self-enforcement features to the long-term supply arrangements.

The arguments set forth in this study associate state power and low differentiation with high central government revenue as a percentage of GDP, and with single party dominance in governments' executive branches. European democracies predominate rankings on the former measure, while developing countries with histories of colonial, military, or civilian authoritarian rule predominate in the latter. While both measures may strongly associate with concentration of power in central governmental organizations, these measures differ in their underlying explanations for the association. The difference in their underlying explanations, I will argue, illuminates the basis for differing approaches of collaboration and state dominance in strategy implementation for the differing groups of countries which rank high on each measure. This difference also warrants an expectation that party dominance

## Chapter 4

uniquely among the political variables, should associate with self-enforcing contracts in MNC/state-linked supplier relationships.

The capabilities measured by central government revenues, may derive from modern industrialized welfare states' control over social entitlements, rather than organizational centralization, per se. Such capabilities may represent policy-setting power vested in relatively non-autonomous central public administrative organs within voluntary, collaborative networks of social institutions, including legislatures, business associations and labor unions. I refer to these capabilities as relatively non-autonomous because public and private actors jointly and explicitly determine the preferences and the power resources reflected in the actions of central decision-making units.

Katzenstein (1977b; 1984; 1985) analyzes the corporatist and consensual democracies of Western Europe and Japan in these terms. Given the proportional representation electoral rules which characterize these countries, the relatively high rank correlation by country (Spearman correlation coefficient, .46  $p=.005$ ,  $n=36$ ) of central government revenues with legislative party fractionalization also suggests the explanatory value of Katzenstein's arguments in this context. He maintained that under these political systems, industrial strategy implementation takes place in a process of continuous negotiation under norms of reciprocity among enfranchised interests representing broad cross sections of societies. Consequently, strategy implementation encompasses policies and capabilities not only to target and assist the successful, but also to compensate unsuccessful, declining and non-targeted sectors, industries or firms. Compensation provides a safety valve against political pressure to alter strategies or policies during implementation, as consequences to interest groups become more evident. Disputes arising from damages to interest groups

## Chapter 4

during implementation can be transferred from governments' economic agendas to their social welfare agendas. This comprehensive social bargain creates a relatively stable institutional context in which economic agents involved in targeted activities may expect objectives and policies to remain consistent over time as industrial strategy unfolds.

Most countries with high values on party dominance do not necessarily have the same capabilities at their disposals. Several countries with high rank on party dominance also rank high on party fractionalization and revenue centralization (most notably Sweden, Japan, and Italy), and seem to fit a collaborational strategy implementation model. Overall, however, country rank on party dominance does not correlate with country rankings on the other measures. On inspection, party dominance as a measure highly ranks a comparatively larger number of countries with historic tendencies toward state intervention to control economic activity. These histories evidence relatively autonomous state capabilities to dominate private as well as public sector activity by replacing market resource allocation with government authority. Relative autonomy refers in this usage to capabilities to formulate and act on preferences distinct from, but not necessarily unrelated to those of interested groups in society. States in such countries may act in concert with interested private parties. But their responses to domestic interest groups' demands often entail strategies which penetrate and supplant the private sector (Duvall and Freeman, 1983; Evans, 1979). Implementation of such strategies may result in evolution of states' organization structures to form subunits such as entrepreneurial enterprises which are not accountable to voters or their representatives. Strategy implementation encompasses governments' policies to target and assist successful sectors, industries and firms, or to operate these entities themselves. But countries pursuing

## Chapter 4

approaches of state dominance lack the institutional structures to compensate losers and unassisted economic agents. Political pressures which arise during processes of strategy implementation, are relatively more likely than in collaborational countries to be resolved with a change in strategy or implementing policies.

Thus far, I have argued that high values on the three political variables signal differences among countries in approaches and political resources for strategy implementation. These point to Party Dominance uniquely, among the three as a likely correlate of the importance of self-enforcement in MNCs' relationships with state-linked suppliers. High values on Party Dominance tend to associate with histories of state entrepreneurship, a strategy which some development scholars suggest depends, in part on uncertainty absorption. Entrepreneurial states tend to concentrate power on central, administrative units. Because state entrepreneurship necessarily associates with low differentiation, this concentration of power pertains both to political and economic functions. Katzenstein (1977b) associated state centralization and low differentiation with case evidence (1977) of increasing industrialized country capabilities to implement industrial strategies through microeconomic intervention.

Katzenstein's industrialized-country-based argument becomes much more complex when blended with a developing-country-based argument such as Evans'. State microeconomic intervention introduces unenforceable public policy contingencies into agreements among the domestic public and private sector economic actors responsible for conducting the targeted activities. Mid-course changes in these public policies necessarily alter parties' incentives to honor these agreements. Application of a principal argument of institutional economics (Coase, 1937; Williamson, 1975) suggests that

## Chapter 4

uncertainty regarding the likelihood of such changes could inhibit rather than encourage the targeted activities. If states vary in businesspersons' perceptions of the likelihood that they will make mid-course changes, state intervention may in some or all jurisdictions at times increase rather than diminish uncertainty. In such circumstances, effective strategy implementation at micro-levels of analysis may require uncertainty-offsetting policies to target agreement forms as well as substantive activities.

If the preceding arguments hold, the state-dominant vs. collaborative strategy implementation approach distinction establishes a criterion for such a variation in managers' perceptions. In general, states with capabilities to pursue collaborative strategies (attributes of high REVGDP; LEGFRAC) can respond to political objections during strategy implementation by compensating damaged parties through their social welfare systems. Such compensation does not require policy changes.

With few exceptions, states in the sample with capabilities to pursue state-dominant approaches to strategy implementation (attribute of high PARDOM), lack balance in their policy instrumentation (See Chapter 3, esp. pp. 79-82). Dominant states may enjoy such instruments as equity-owned enterprises and development banks for directly engaging in economic activity. But many display a relative lack of resources, administrative wherewithal and political will for broadly-encompassing compensation of displaced or damaged societal groups. States with relatively fewer policy instruments may need to deploy them against multiple targets. As Tinbergen showed in another context, however, more instruments than targets are required for successful policy implementation (1952). Dominant states which face shifting priorities or political demands (whether these originate in broadly-encompassing or elite groups), may equivocate in their policy instrument

## Chapter 4

deployments, because they lack alternative instruments or compensation capabilities. As a result, managers may perceive public policy contingencies arising from state dominance as less reliable than those which associate with collaboration.

This argument suggests implications for variation in MNCs' managers' perceptions of the importance of self-enforcement as states' local sourcing strategy implementation capabilities and approaches vary across countries. If countries' strategy implementation capabilities align increasingly with state-dominant approaches as single party dominance of their executive branches increases, then their propensities to respond to political pressure with policy changes also increase. Under these circumstances, self-enforcing contracts must on average, play an increasingly important role in the public-policy-contingent relationships which MNCs form with local suppliers. Such contracts reassure MNCs that suppliers' incentives to perform according to the agreed terms of supply arrangements will remain compatible with their own, even if governments alter the public policies which provided the incentives which created the initial impetus to the agreements. If these arguments hold, data should support the following hypothesis:

$H_3$  (G4) Single party dominance of the executive branch (PARDOM) associates significantly and positively with the perceived importance of self-enforcing contracts (SELCON) in affiliates' public-policy-contingent domestic supplier relationships.

Furthermore,  $H_1$  and  $H_3$  together imply the second equation in the four-equation system proposed for statistical testing in this study:

$$(2) \quad \text{SELCON} = -\beta_1 \text{ILESTAB} + \gamma_4 \text{PARDOM}$$



## Chapter 4

### 4.3 International strategy, domestic environments and the organization of MNCs' activities.

The preceding section presented hypotheses concerning association among variables representing attributes of social and political organization in countries; national strategy implementation approaches and capabilities; and variations in contractual form governing relationships between MNCs' affiliates and state-linked suppliers. The importance of self-enforcement features in contracts was hypothesized as positively and linearly associated with the degree to which single parties have dominated executive branches of national governments, and as negatively associated with the stability of countries' institutional/legal environments (ILESTAB). ILE stability was in turn, hypothesized as an endogenous variable dependent with positive sign upon single party dominance, central government revenues and legislative party fractionalization. The relationships among these variables represent the main concerns of this study.

These relationships and variables, however, serve instrumental roles in the implementation of states' strategies, and do not in themselves constitute objectives. The two equations which incorporate these variables and hypothesized relationships, therefore, constitute a subsystem within a somewhat larger model of MNCs' affiliates' external sourcing. The system takes into account the interaction of states' local sourcing strategies and MNCs' international competitive strategies in establishing values on this outcome variable at the national affiliate level of analysis. I specify these tests within a systemic context for three reasons. First, the relationships among the variables of interest cannot be assessed outside of the larger system within which they intermediate results. Second, construct validity for the concepts modeled, and the reliability of proposed measures of constructs may be assessed on a predictive basis (See Cooke and Campbell, 1979), through

## Chapter 4

confirmation of certain necessary relationships among the variables of interest and other system elements. Third, the full information maximum likelihood (FIML) procedure employed for model parameter estimation assesses all relationships within the total system simultaneously. Consequently, missing variables would result in biased parameter estimates (See Chapter 5).

MNCs' strategies configure their activities among affiliates in countries and between their affiliates' value chains and those of suppliers. These allocations shape MNCs' international goods and information exchange networks. Networks embody MNCs' production and transaction cost advantages over other MNCs and over domestic firms. Production cost advantages pertain to advantages which accrue to physical manufacture or creation of services, including economies of scale, economies derived from superior technology, advantageous labor contracts or better-trained, more productive workers. Chapter 2 referred to sources of production cost advantages, as asset ownership advantages. Asset advantages refer to particular firms' proprietary rights in technology, managerial systems or raw materials sources, or to their investments in plants of economic scale which occupy substantial portions of imperfect markets in final or intermediate goods (Dunning, 1988).

Transaction-cost advantages proceed from MNCs' transactional ownership and internalization advantages. These advantages accrue to MNCs' ownerships of international goods and information exchange networks. They permit MNCs to undercut the costs of market contracting for activities related to their asset advantages, by coordinating these within their organizations (See Chapter 2).

When governments implement local sourcing strategies, they enter into strategic interactions with MNCs. Governments aim in these interactions to influence MNCs to depart from the allocations of activities between coordination and contracting which their competitive advantages would

## Chapter 4

otherwise suggest. Factors which create the interaction include 1) managers' comparisons of production costs among their operations, intra-MNC suppliers and government-assisted external sources; 2) managers' perceptions of the reliabilities of past government policies affecting their businesses; 3) states' capabilities to target domestic economic sectors, industries, firms and transactions to make appropriate inputs available to MNCs at attractive prices, and 4) states' capabilities to induce appropriate instruments of agreement between MNCs and local suppliers, to offset any managerial concerns regarding the effects of government policy changes on local suppliers' incentives to perform.

In order to take all of these factors into account, three additional variables are required, plus two equations into which either or both of the dependent variables of equations (1) and (2), ILESTAB and SELCON enter as independent variables. Modeling MNCs' allocations of activities between their organizations and external suppliers requires equations with dependent variables affiliate value-added (VALADD) and outsourcing (OUTSRC). Value-added entails the calculation of the ratio of affiliate sales value minus materials costs over sales value. Outsourcing entails a calculation of the percentage in affiliates' total costs of locally-sourced materials (OUTSRC). Value-added pertains to internalized activities, or the outcomes of "make" decisions. Outsourced materials pertain to external purchasing, or the outcomes of "buy" decisions.

Theory also necessitated including a variable to control for MNCs' production and transaction cost advantages relative to local suppliers attributable to asset and transactional ownership advantages. This latent variable, internalization propensity (INTERN) enters independently in equations both for OUTSRC and VALADD. In order to demonstrate the validity of

managerial estimates of affiliate value-added and outsourcing and control for firm-specific competitive advantages, the following relationship must hold:

- R<sub>1</sub>** (G5,6) As MNCs' production and transaction cost advantages over external contractors increase, (INTERN) affiliate value-added (VALADD) significantly increases on average, while outsourcing (OUTSRC) decreases.

The direction of the relationship between affiliate value-added and outsourcing depends on characteristics of particular data sets. If externally-sourced goods replace affiliates' internal production, affiliates' value-added decreases, yielding a negative sign. If externally-sourced goods decrease affiliates' intrafirm trade, three possibilities arise. Value-added increases if the local sources undercut intrafirm sources' costs, remains the same if intrafirm sources' costs equal those of local sources, and declines if intrafirm costs undercut local sources. The first case envisions a positive relationship, while the second and third envision a negative relationship. Given the nature of this study, field research should have been expected to uncover data concerning external sourcing which results from subsidies intended to reduce affiliates' imports by undercutting their costs. If so, the first case of intrafirm trade substitution seems likely to dominate others, and the sign of the relationship between outsourcing and value added should prove positive if managers provide valid estimates of the two figures. I nevertheless state my expectation of the sign on this relationship with ambivalence, given the ambiguities just discussed.

- R<sub>2</sub>** (B3) Affiliates' value-added (VALADD) associates positively, on average with affiliate outsourcing (OUTSRC) when data reflect subsidies to local producers selling import-substituting inputs to MNCs.

As self-enforcing contracts (SELCON) represent policy instruments in the implementation of government assistance to local suppliers, similar logic governs the expectation of sign on path B4.

## Chapter 4

- R<sub>3</sub> (B4) The importance of self-enforcing contracts between affiliates and local suppliers (SELCON) associates positively, on average with value-added (VALADD) when data reflect subsidies to local producers selling import-substituting inputs to MNCs.

The question of any relationship between the institutional/legal environment and value-added falls prey to similar ambiguities. The arguments presented in the study suggest an equivalence between ILE stability and low transaction costs of dealing with state-linked suppliers, and vice versa. The literature on FDI theory reviewed in Chapter 2 suggests that firms decide among alternative organizational modes to internationally exploit their competitive advantages, based upon perceived market failures. The alternatives comprise trade, licensing, joint ventures, or investment. Despite distinctions as to the origins of these failures among categories such as Arrow's fundamental paradox of information, (1971: 152) and institutional differences among countries, FDI theorists who rely on internalization theories have addressed these uniformly as inhibitions to contracting. These inhibitions arise from increases in uncertainty, which the theory construes as increases in transaction costs. Transaction costs arise in the process of search, negotiation, and contract writing and are exacerbated by uncertainty over ex post contractual enforcement (Teece, 1981). High transaction costs associate in the theory with a necessity to invest rather than pursue alternative international business modes.

Affiliate value-added corresponds to commitments of resources for conducting activities within firms in countries. Consequently, this measure should associate strongly with both stock and flow measures of investment. FDI theory as unadorned transaction costs economics implies that if high transaction costs impel investment, then declines in transactions costs should result in relatively fewer within-affiliate activities and lower affiliate

value-added. Value-added should decline because alternatives to investment, such as licensing competitive advantages to unrelated parties become feasible.

This association, however, is not unambiguous across all levels of uncertainty nor correspondingly, transaction costs. Williamson, for example restricted the applicability of his theorizing to circumstances of intermediate uncertainty (1981). Figure 4.3 illustrates the implications of such a restriction within FDI theory. The figure assumes for simplicity that

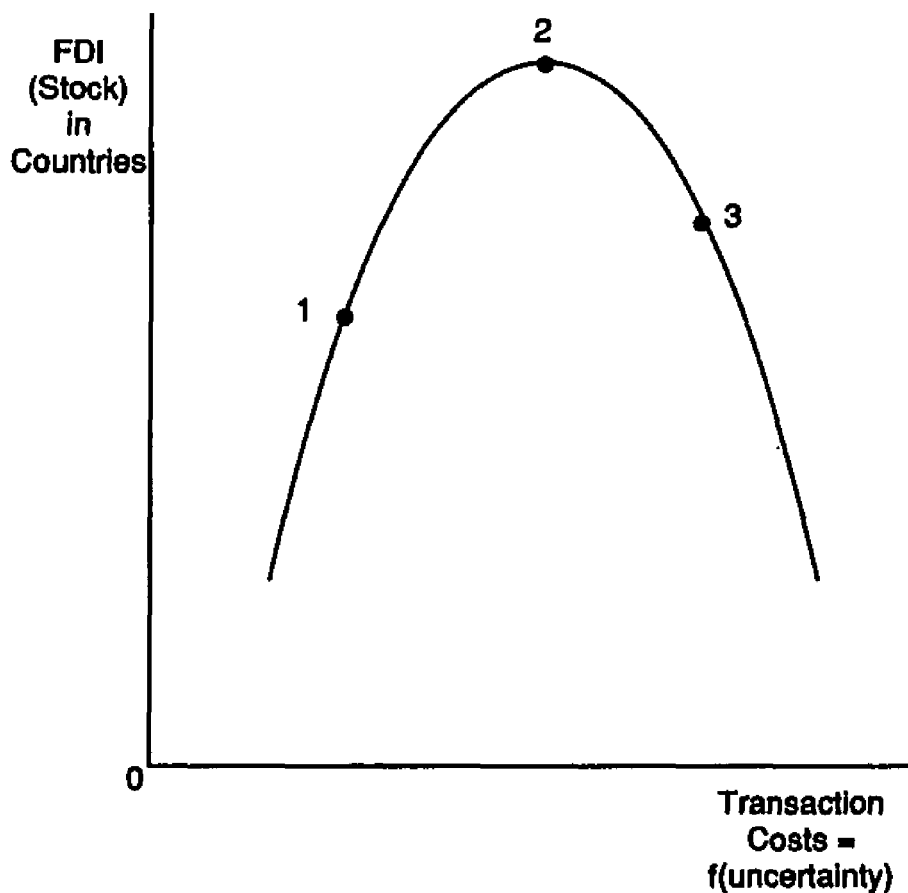


Figure 4.3: Foreign direct investment stock in a country as a function of the overall structure of transaction costs.

## Chapter 4

FDI stock in a given country associates directly as a continuous function of transaction costs levels. This assumption abstracts from the theory, because transaction cost levels may associate with discrete choices of mode which imply levels or ranges of investment stock. But specific money value investment stocks within these ranges would depend on multiple additional factors, including market sizes, exports, capital intensity of the production process, etc.

The restriction implies that the theory can tell us little about extreme circumstances of low or high uncertainty. But Williamson never clarifies the limits of the "intermediate range" over which his explanation of business organization applies. One "intermediate range" might choose the limits of explanation as the range in Figure 4.3 where FDI increases monotonically with transaction costs. Beyond the peak of the function, at a certain (arbitrarily chosen) level of uncertainty, FDI decreases. Below a certain threshold of uncertainty, the theory may explain little about choices among business modes. Within the logic of the theory, countries with the best developed markets offer the lowest transaction costs. But considerations such as relative ROI, additional factors from Dunning's OLI model such as location and network ownership, and financial factors such as foreign exchange rate changes might dominate market failure considerations in determining modes of doing business in well-developed markets.

The upper range of uncertainty and transaction costs clearly encompasses countries with the least-developed markets. Examination of estimates of the cross-national distribution of FDI stock supports the notion that below some threshold of institutional development and at some correspondingly high level of transaction costs, FDI may not be a preferred international business mode. Accordingly, 1984 estimates established that only 27% of all FDI stock in

## Chapter 4

developing countries existed in those countries with per capita annual income of less than \$1000. This 27% was equally divided between countries above and below \$399 (OECD, 1987).

An alternative "intermediate range" might encompass the range of the Figure 4.3 function between points 1 and 3. At point 1, with low transaction costs and FDI, MNCs might choose either to trade products which embody their competitive advantages, or to license. At point 2, (high FDI, intermediate transaction costs), complete internal transfer of proprietary technologies critical to MNCs' competitive advantages may be feasible, but not licensing. At point 3, (intermediate FDI, high transaction costs) neither licensing nor internal transfers of critical technology take place. This example assumes that affiliates which can receive critical technology have the potential of incorporating relatively more value chain activities within their local operations and having higher asset values than affiliates restricted to non-critical transfers.

In summary, simple readings of FDI theory obscure a complex set of relationships between uncertainty-derived transaction costs and choice of operational mode in foreign markets. FDI does not act as a positive direct linear function of transaction costs, except over a limited domain. The sign on the aggregate relationship between institutional/legal stability and value-added in the model therefore, cannot be predicted without reference to characteristics of any sample which might be drawn for test. Such a prediction might be possible for individual cases, taking into account initial uncertainty levels prior to the change plus other country-specific factors, maturity of the firm's technology, and nature of its competitive advantage. Therefore I will refrain from predicting the sign on path B3.

R<sub>4</sub> (B2) The sign of the relationship between countries' Institutional/Legal Environmental stability (ILESTAB)



## Chapter 4

and affiliate value-added (VALADD) can not be predicted in cross-sectional aggregate data.

Taken together, the relationships above imply the following equation for value-added:

$$(3) \quad \text{VALADD} = (+/-) \beta_2 \text{ILESTAB} + \beta_4 \text{SELCON} + \gamma_5 \text{INTERN}$$

Finally, writing the fourth equation for dependent variable outsourcing (OUTSRC) requires an hypothesis predicting the relationship in which the importance of self-enforcing factors (SELCON) enters the equation. This study has argued that self-enforcing factors in the form of suppliers' transaction-specific asset exposures assume greater importance in MNCs' managers' perceptions of public-policy-contingent relationships, as their perceptions increase of unpredictability in public policies affecting their businesses (ILE instability). Hypothesis 1 summarized the expectations which follow from this argument.

As a second consideration, the study explores the relationship of self-enforcing contracts to the capabilities which state organizations confer on governments to implement industrial strategies through microeconomic interventions (Hypotheses 2 and 3). Finding in favor of these hypotheses does not establish that governments' microeconomic intervention capabilities effectively induce MNCs to behave in accordance with state preferences, when their international strategies dictate otherwise. Intervention might have no effect, or even take an inverse effect of states' intentions, if clumsily or erratically implemented.

Systematic patterns of cross-national association between MNCs' external purchasing and governments' incentives provide necessary, but insufficient evidence to support a conclusion that states can affect MNCs' strategies.

## Chapter 4

International strategies permit local managers a range of bargaining discretion which includes authority to conduct incremental local sourcing in response to government incentives. In these circumstances, their responses fall within a range of behavior which strategies permit. Chapter 2 termed such actions within such ranges "Type 1 responses." This range includes scope for "good citizenship," as well as for measured responses to incentives which, in managers' perceptions have uncertain terms or durations. Governments do not affect MNCs' strategies when they induce Type 1 responses.

Augmented self-enforcement through supplier exposures of transaction-specific assets, however, may provide a margin of reassurance which permits MNCs to make choices which they would not otherwise have made under uncertainty. Chapter 2 termed such actions "Type 2 responses" to host government policy initiatives. When managers do things they would not otherwise have done, given strategy, their behavior meets Robinson's criterion (1987) for sufficient grounds to establish an impact of government action on their MNCs' strategies. Indeed, in his 1987 commentary on his earlier survey (1983), Robinson lists guarantees of enforceability among four government regulatory moves which meet a logical test for such effects. If this reasoning holds for the case of local sourcing strategies, then evidence that self-enforcement in public-policy-contingent supplier relationships associates cross-nationally with increased external sourcing constitutes evidence of government-induced strategic change in MNCs.

Such evidence would require confirmation of the following hypothesis:

H<sub>4</sub> (B5) As managers' perceptions of the importance of self-enforcing contracts in public-policy-contingent supply relationships (SELCON) increases, affiliates' external sourcing levels (OUTSRC) increase.

In order to establish the hypotheses and arguments of this section in preference to reasonable alternatives, one additional hypothesis requires support.

Chapter 4

**H<sub>5</sub>** (No other Gamma paths) No other significant relationships exist between the independent variables in the model, and the dependent variables.

The expected relationships among the dependent variable outsourcing (OUTSRC) and independent variables are summarized in the equation:

$$(4) \quad \text{OUTSRC} = \beta_3 \text{VALADD} + \beta_5 \text{SELCON} - \gamma_6 \text{INTERN}$$

Table 4.1 summarizes the variables included in the model, with their expected signs.

**Table 4.1:** variable list for structural equation model.

<u>Name</u>	<u>Symbol</u>	<u>Hypothesis &amp; Associated Var</u>	<u>Expected Sign</u>
Institutional/Legal Environmental Stability	ILESTAB	1 SELCON	-
Legislative Party Fractionalization	LEGFRAC	2 ILESTAB	+
Cent. Gov't. Revenues as % of GDP	REVGDP	2 ILESTAB	+
Single Party Dominance of Gov't Executive Branch	PARDOM	2 ILESTAB	+
		3 SELCON	+
Self-enforcing contracts in public-policy-contingent supply arrangements.	SELCON	4 OUTSRC	+
Internalization Propensity	INTERN	<u>Relationship and Associated Variable</u> 1 VALADD	+
		1 OUTSRC	-
Value-Added Outsourcing	VALADD OUTSRC	2 OUTSRC	+

## Chapter 4

### 4.4 Summary

This study has suggested that managers' impressions of governments' past records of policy stability critically affect governments' present capabilities to persuade MNCs to accept publicly-funded incentives for local sourcing. This chapter has presented a set of equations, relationships and hypothesized relationships to facilitate a statistical exploration and test of four hypotheses which proceed from this assumption.

Hypothesis 1 proposed that managers place a higher value on enforceability guarantees in public-policy-contingent supply arrangements, as their perceptions increase that unpredicted public policy changes have negatively affected their businesses. Hypothesis 2 proposed that political and social organizational attributes of host polities influence the formation of these perceptions.

The study has argued that these characteristics associate with two approaches to strategy implementation: *intersectoral collaboration and state dominance*. Collaboration capabilities permit governments to overcome political obstacles to strategy implementation by compensating economic agents damaged by or left out of their plans. These capabilities thereby insulate industrial strategy from domestic politics. Dominant states lack the financial and institutional wherewithal for compensation. Consequently, these states face a higher probability that implementation obstacles will need to be met with modifications to strategies and with policy changes. As a result, these states' policies (such as local sourcing incentives) to implement strategies will more likely associate with uncertainty-offsetting mechanisms such as self-enforcing contracts. Hypothesis 3 proposed such an association for countries whose political characteristics favored state-dominant strategy implementation approaches.

## Chapter 4

The final hypothesis (4) sought to establish the nature of states' local sourcing strategies' effects on MNCs' strategies. Any finding under appropriately-controlled conditions, of association between MNCs' international sourcing patterns and governments' incentives may well indicate an effect of these public policies on MNCs' strategies. Due to the difficulties of controlling for managerial discretion within MNCs' international strategies, these findings in the present model would fulfill necessary, but insufficient conditions to establish such effects. Findings of an association among public policy instability, the importance of self-enforcement and external sourcing, however, may meet a logical criterion of sufficiency without controlling for discretion. The test relies on reasoning that the association of unstable policy regimes, self-enforcement and government incentives provides solid evidence that governments have used special reassurances to persuade MNCs' managers to do something which they would not normally do. This departure from strategy-as-usual entails making plans which rely on the policies of governments with poor records for reliability.

The next chapter describes the operationalization of the model, field research, and statistical tests of the propositions detailed here.

## CHAPTER FIVE

### OPERATIONALIZATION, TESTING AND RESULTS

#### 5.0 Introduction

The four equation model of Chapter 4 expressed hypothetical and necessary relationships among variables proposed to jointly shape MNCs' affiliates' internal coordination and external transaction networks. This chapter provides further details on the statistical method proposed to test whether these relationships hold in data collected on actual business and state organizations. In symmetry to the attention accorded to the structural equation model and relationships in Chapter 4, this chapter discusses measurement issues, and the measurement model to operationalize the latent variables. The chapter also describes the design and conduct of field research to gather data, and discusses results of a parameter estimation procedure and statistical tests conducted on the combined structural equation/measurement model.

#### 5.1 Statistical Method

As a mathematical and statistical structure, the model proposed in Chapter 4 does not categorically differ from the small macro-economic models commonly used to study national economies. It is an interdependent system in which which three out of four of the equations' dependent variables interrelate as independent variables in at least one other equation. The discussion has assumed simple, linear relationships among the variables.

## Chapter 5

Most of the variables, however, differ from economic variables. Researchers may directly observe economic variables like prices, as data which occur objectively in the environment. But micro-economic abstractions such as Dunning's (1988) perceptions of market failure, do not brook direct observation. Researchers may view these as factors underlying observable indicators, including categorical, content analytic, survey, or other types of subjective items. But in gathering such data, researchers indirectly observe the hypothesized underlying factors, or latent variables. Researchers' measures of these variables contain error which needs to be statistically taken into account.

The model proposed here contains both indirectly- and directly-observable variables. Value-added (VALADD), outsourcing (OUTSRC), central government revenues (REVGDP), legislative party fractionalization (LEGFRAC) and single party dominance of state executive branches (PARDOM) may be directly observed. But the remaining theoretical concepts require latent variable operationalization using a measurement model. The measurement model becomes subject to psychometric standards for checking reliability. The parameters of the combined measurement and structural equation model may be estimated using some combination of factor analytic and regression techniques. These parameter estimates may be submitted to t-tests of significance. In addition, overall model goodness of fit may be assessed using chi-square as well as other less-well-known (and less-well-understood) test statistics.

### **5.11 Latent variable measurement: how confirmatory vs. exploratory approaches relate to causality and structural equation modeling.**

Statistical methodology offers two factor analytic approaches to investigators wishing to combine latent variable measurement and structural equation models. Exploratory approaches proceed in three stages. First,

## Chapter 5

investigators allow factors to emerge by submitting measurement items to computer analyses which group them on the basis of common variance. Second, investigators use the resulting parameter estimates to build indices which score respondents on the resulting factors. These indices may be used as variables in the third stage, regression analysis to estimate the parameters of the structural equation model. Confirmatory approaches proceed in only two steps. First, these estimate the regression coefficients (equivalent to loadings) of items on factors or latent variables, as specified in advance. The investigator may check the reliabilities of latent variables so constructed, and trim or add items culled from the measurement data as theory suggests. The second stage proceeds, once the investigator arrives at latent variables of appropriate item structure and acceptable reliability. At this stage, the parameters of both the causal and measurement models may be calculated simultaneously using a full information estimation procedure such as that embodied in a computer program such as LISREL (Joreskog and Sorbom, 1986).

Bagozzi and Phillips (1982: 477-9) enumerate several advantages to the confirmatory approach. First, if underlying factors are correlated, exploratory methods may produce incorrect conclusions about the number of factors, and distort factor loadings. Confirmatory approaches produce more factors, under these circumstances. Second, confirmatory approaches permit the investigator to explicitly estimate measurement error associated with indicators, thereby increasing the factors' reliabilities as measurements of constructs. Third, exploratory approaches express the indicator scores used in later regression analyses as functions of all factors extracted, based upon their factor loadings. But confirmatory approaches tie specific concepts to specific measures, and none others. Confirmatory approaches thereby show a



greater degree of consistency with deductive modes of theorizing, which demand that theories be specified in advance, and that models for testing their implications correspond to their concepts (Northrup, 1947).

The paucity of longitudinal data on organizations, especially for cross-national studies, places a premium on linking a priori logic, models and findings as tentative grounds for inferences of causation from parameter estimation of structural equation models. Cross-national, cross-sectional studies such as the project reported here compare phenomena across countries, rather than over time. The structure of interrelationships in cross-sectional data offers no information about the dynamics of their interaction. Consequently, inferences of causation from cross-sectional data make no sense except as contingent speculations which hold only in circumstances strictly specified in advance by deductive theorizing. Even then, the data analysis must assume that phenomena under observation represent universal processes which have reached different stages in each country.

In discussing the structural equation model, the tenuousness of causal inference from cross-sectional data has dictated that this study favor language suggestive of association rather than causation, and acknowledge other explanations which may exist for the relationships. The strength of any support for the argument provided by data also depends on the care given to issues of measurement reliability and construct validity in operationalizing the model.

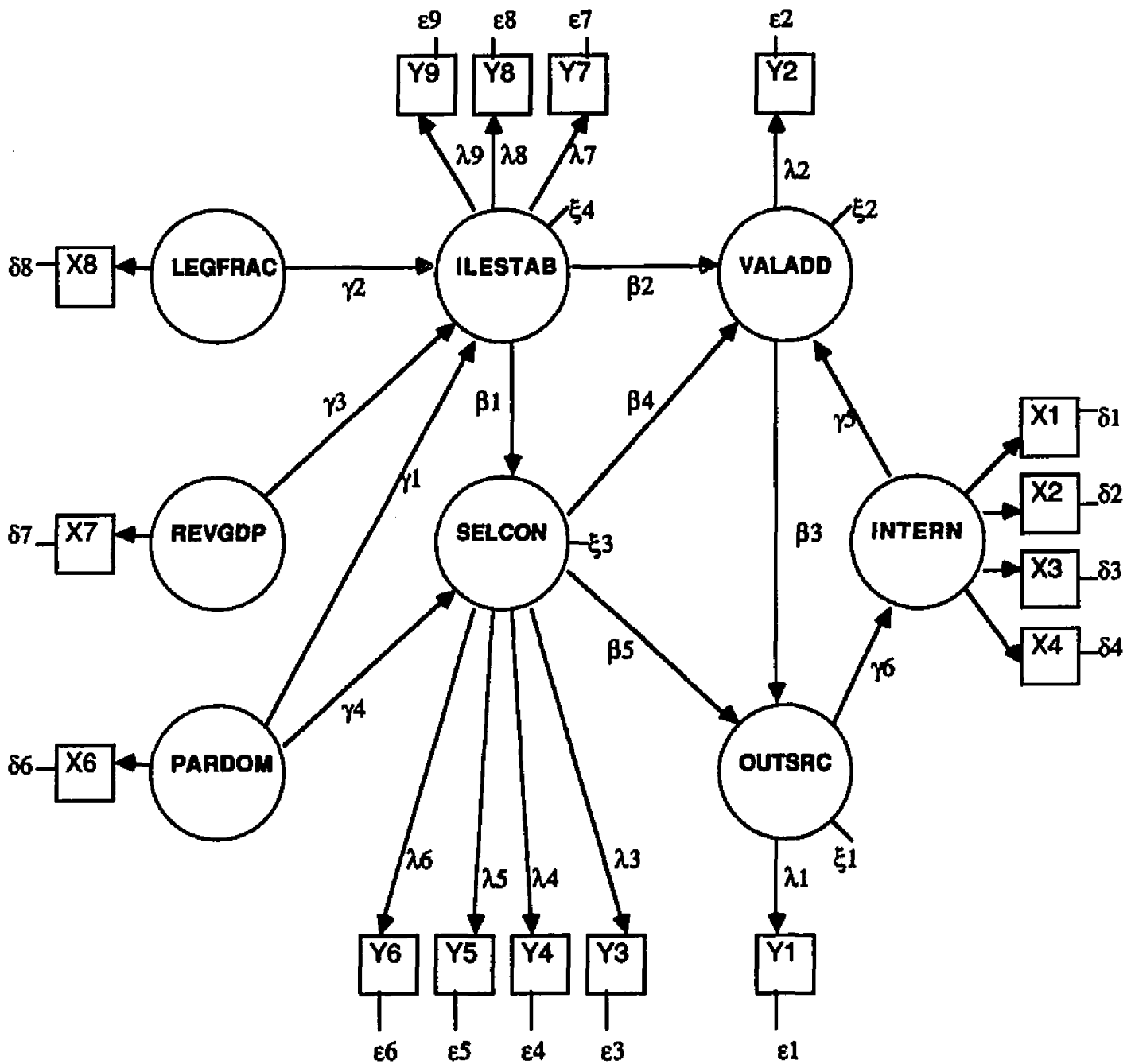
## **5.2 The Measurement Model: Data gathering, item selection and confirmation.**

The assumption of measurement error in the latent variables creates the possibility as well as necessity of checking the reliability of the sets of observed items selected to operationalize latent variables. This section will

discuss the approach used to generate reliable, theoretically-consistent indicators of the latent variables representing managerial perceptions of political environments and contractual coping mechanisms (ILESTAB and SELCON), and of firm-specific cost advantage (INTERN). The approach began with the theory described in preceding chapters of this study, which informed each of the steps described in this section. These include questionnaire design, conducting a field survey of some U.S. MNCs' foreign affiliates and using their responses to cull questionnaire items to arrive at reliable indicators and combinations of indicators for latent variable operationalizations. This section will also discuss construct validity.

Figure 5.1 shows in schematic form the combined structural equation and measurement models for the research, as set up for estimation using the LISREL computer program. The circles correspond to the theoretical concepts, or constructs manipulated in the theoretical discussions thus far, but now operationalized as factors or observable variables. The numbered boxes correspond to the observable indicators which constitute the measurement model. Each number associates with an indicator to be identified, with its data source, in Section 5.23. The  $\beta_j$  correspond to the parameter estimates on the endogenous variables of the structural equations; the  $\gamma_j$  correspond to the parameter estimates on the exogenous variables. The index numbers match the hypotheses of Chapter 4. The  $\lambda_j$  correspond to regression coefficients of the observable indicators on the latent variables. These represent factor loadings of the measurement indicators on the operationalized concepts.

Note that error terms associate both with measurement indicators of latent variables, and with each structural equation. Single-indicator variables such as OUTSRC are assumed to be directly observed and implicitly measured without error. This requires the error terms for such variables to



**Figure 5.1:** Path diagram depicting combined structural equation and measurement model (see text, Tables 4.1, 5.5, 5.6, 5.7).

be set equal to zero, and the factor regression coefficients to one. Such indicators behave as variables entered into conventional regression analyses. As is conventional, I have set one  $\lambda_j$  for each latent variable equal to one. This sets the arbitrary scale for the latent variable.

The next three sections discuss the process of generating candidate indicators for the latent variables, and selecting among these. Data to represent managerial perceptions of the variables ILESTAB, SELCON, and INTERN as well as VALADD and OUTSRC came from a questionnaire survey designed and conducted as part of this research. (Data to represent the political side of the model came from the archival and media sources discussed in Chapter 3). The discussion proceeds in three parts. Section 5.21 discusses participant identification procedures and data-gathering. Section 5.22 construct validity and reliability as conceptual and technical issues. Section 5.23 discusses questionnaire design, item selection and reliability of the latent variable measures in the study. Section 5.24 discusses the managerial estimates used to operationalize outsourcing and value-added.

#### **5.21 The questionnaire survey: prospective respondent identification, data gathering and characteristics of respondents.**

Data to operationalize the latent variables, as well as on affiliate value added and outsourcing were gathered from a mail questionnaire survey conducted between November, 1987 and June, 1988.

##### **Participant identification and data gathering.**

Target respondents for the survey included managing directors and their designated respondents among top managers of U.S.-based multinational corporations' international affiliates. The Conference Board's Key Companies Directory (1987) formed the basis for initial contacts. The Directory sponsors endeavor to list all U.S. companies having overseas involvement. In

## Chapter 5

fact, it mainly lists publicly-owned companies. The selection rule for this research restricted the participants to non-natural resource companies and operating in five or more countries. Companies with armaments as primary outputs were also excluded, if the defense-related businesses could not be isolated from other operations for survey purposes.

The strategy to assemble a participants' list did not envision the need to contact all companies in the Directory, as the target number of participating international affiliates of the MNCs was limited to slightly over 100. This number was selected to provide a large-enough data base to support the statistical methodology (See Section 5.32 below), while remaining within budgetary constraints. Beginning in September, 1986, twenty-five randomly-selected companies from the list were contacted at their head offices with invitations to participate in the survey. Most-recent annual reports and 10K forms provided a contact list of company subunits and their top executives involved in international business. Companies with multiple international units received separate invitations addressed to relevant decision-makers in each unit. These invitations requested authorization to survey the managing directors of the relevant business unit's international affiliates, and enclosed a copy of the questionnaire marked "For review only." At least one and often many more followup telephone calls and letters followed initial letters of invitation. Often, invitations needed to be redirected to multiple decision-makers, and each subsequently contacted by telephone.

The September, 1986 round of contacts produced an insufficient response from the 25 head offices to provide reasonable expectation of obtaining 100 participating affiliates. In order to expand the list of contacts, a second group of head office operations was randomly selected from the entire list (without replacement of the first group). This process was continued, with

## Chapter 4

additional groups being randomly selected until 171 of the companies on the list had been drawn. Of these, 146 received invitations. Twenty-five were never contacted because their international operations were defense-related or natural resource extractive, because they were not U.S.-headquartered, not primarily manufacturers, or because they were involved in major litigation or corporate restructuring. Of the 146 head offices contacted, 123 declined or asked for a delay. Twenty-three (13.45%) accepted the invitation.

Participant head offices provided their authorizations, and a list of company affiliates' addresses and managing directors. Five of the 23 participants provided partial lists of affiliates. The remainder provided lists covering their companies' global operations. This process eventually assembled a list of potential participants numbering 203 affiliates.

Head offices varied in the support which they offered to the survey. One head office sent its affiliates a separate letter requiring the designated recipient to respond. About half sent separate letters on company stationery, authorizing the survey. Some pointed out that responses were not required. All but two permitted mention of a head office review and authorization process conducted by a named executive. One permitted only an anonymous review to be mentioned. One forbade any mention of head office, authorization or review.

### **Characteristics of the Respondent Group**

This mixed bag of varying authorization levels and participant survey support netted a group of 129 affiliate respondents, of which 111 proved usable for the analysis reported here (See Appendix 1 for details of survey mailing procedures, the questionnaire and additional information). This amounts to 4.8% of the 2,296 affiliates associated with the 171 head offices originally selected.

## Chapter 5

The small response rate, such practices as accepting head-office-designated prospect lists, and the variation in support offered by head offices require that the participant group be regarded as a sample of convenience. The participant group does not represent a random sample of available prospects. Consequently this study, although it reports the results of quantitative analysis, should be interpreted as a multi-firm case study of manufacturing companies. Findings reported here may reflect only those companies and may not be generalizable to the overall population of MNCs, their industries, nor to MNCs headquartered outside the United States. Furthermore, the statistical effects of variation within the sample may arise as an artifact of company, industry, and country location combinations. Efforts to control for such factors and/or admit possible biases arising from them will be reported in upcoming sections.

Country representation is also relatively limited (to 36). This fact attenuates variation in the political environmental measures. Consequently, it would be inappropriate to generalize findings beyond the spectrum of political institutions unique to these environments.

Table 5.1 presents the list of participant industries, numbers of affiliates cleared for contact in each, and the number of affiliates which eventually participated in the research. Table 5.2 presents the list of countries for which at least one affiliate participated, broken down on a per-industry basis. Table 5.3 presents the breakdown by title, of participants. These included purchasing manager; manufacturing materials manager; supply manager; works manager; manufacturing director; operations director; business planning, development or strategy staff; and managing director.

Table 5.4 presents the country and world regional breakdown of affiliate responses used in the data analysis. The allocation of responses skews toward

Chapter 5

Table 5.1: Usable respondent group segmented by industry

INDUSTRY(a)	AUTHORIZED CONTACTS(b)	RESPONSES(c)	c/b*	c/111*
ADHESIVES	8	6	75.0	5.4
AUTO PARTS	21	6	28.6	5.4
AUTOMATION	10	5	50.0	4.5
AUTOMOBILES	39	25	64.1	22.5
COMPUTERS	24	8	33.3	7.2
CONSTRUCTION	3	0	00.0	0.0
ELECTRIC DEVICES	14	7	50.0	6.3
ELECTRIC MOTORS	3	2	66.7	1.8
FASTENERS	6	5	83.3	4.5
FILTRATION	11	7	63.6	6.3
HEAVY TRANSPORT	5	4	80.0	6.3
PHARMACEUTICAL	21	13	61.9	11.7
SECURITY	3	2	66.7	1.8
SPECIALTY MATERIALS	10	5	50.0	4.5
TIRE AND RUBBER	7	4	57.1	3.6
TOILETRIES	17	12	70.6	10.0
TOTALS	203	111	100.0	100.0



Chapter 5

Table 5.2: Breakdown of respondents by industry and country.

RESPONDENTS COUNTRY	INDUSTRY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
ARGENTINA					1										1	1	3
AUSTRALIA		1			1				1			1				1	5
BELGIUM				1			1			1		1					4
BRAZIL		1	1		2		1			1					1		7
CANADA						1	1									1	3
CHILE				1													1
COLOMBIA				1													1
DENMARK						1											1
FRANCE										1	1	1					3
GERMANY		1		1	2	1			1		1	1					8
HONG KONG						1											2
INDIA												1					1
INDONESIA																1	1
IRELAND			1														1
ITALY			1	1			1		1								4
JAPAN					1	1				1				1			5
KENYA				1												1	2
KOREA				1				1									2
LUXEMBOURG				1													1
MEXICO		1			1											1	3
NETHERLANDS										1				1		1	3
NEW ZEALAND			1		2											1	4
PAKISTAN												1					1
PORTUGAL												1			1		2
SINGAPORE				1	1			1									3
SOUTH AFRICA										1		1				1	3
SPAIN				1	1				1			1		1	1		6
SWEDEN				1								1	1				3
SWITZERLAND				1	1												1
TAIWAN			1	1	1							1					4
THAILAND												1					1
U.K.		1		1	2				1		1		1	2		1	10
U.S.A.		1	1				2			1	1						6
VENEZUELA					2	1											3
YUGOSLAVIA				1													1
ZIMBABWE																1	1
TOTAL		6	6	5	25	8	7	2	5	7	4	13	2	5	4	12	111

\* INDUSTRIES

- |                         |                     |                    |                |
|-------------------------|---------------------|--------------------|----------------|
| 1= ADHESIVES            | 2= AUTO PARTS       | 3= AUTOMATION      | 4= AUTOMOBILES |
| 5= COMPUTERS            | 6= ELECTRIC DEVICES | 7= ELECTRIC MOTORS | 8= FASTENERS   |
| 9= FILTRATION           | 10= HEAVY TRANSPORT | 11= PHARMACEUTICAL | 12= SECURITY   |
| 13= SPECIALTY MATERIALS |                     | 14= TIRE & RUBBER  |                |
| 15= TOILETRIES          |                     |                    |                |

Chapter 5

Table 5.3: Respondent breakdown by title.

TITLE	n	Pct.	Cume
PRESIDENT	9	8.1%	8.1%
MANAGING DIRECTOR	48	43.2	51.4
DIVISION MANAGER	2	1.8	53.2
GEO HEAD	2	1.8	55.0
FINANCE HEAD	3	2.7	57.7
FINANCE AMBIG	4	3.6	61.3
STRATEGY	2	1.8	63.1
OPERATIONS	9	8.1	71.2
PURCHASING	8	7.2	78.4
MARKETING	1	.9	79.3
SALES	2	1.8	81.1
PERSONNEL	1	.9	82.0
NO TITLE	20	18.0	100.0
	-----	-----	
TOTAL	111	100.0	

Chapter 5

**Table 5.4:** Respondents by country, categorized by per capita income level according to World Bank criteria (See World Bank, 1988).

RESPONDENTS BY COUNTRY

1. INDUSTRIAL MARKET ECONOMIES	TOTAL: 69	(62.2%)
AUSTRALIA	5	
BELGIUM	4	
CANADA	3	
DENMARK	1	
FRANCE	3	
GERMANY	8	
IRELAND	1	
ITALY	4	
JAPAN	5	
LUXEMBOURG	1	
NETHERLANDS	3	
NEW ZEALAND	4	
SPAIN	6	
SWEDEN	3	
SWITZERLAND	2	
UNITED KINGDOM	10	
U.S.A.	6	
2. UPPER MIDDLE INCOME ECONOMIES	TOTAL: 34	(30.6%)
ARGENTINA	3	
BRAZIL	7	
CHILE	1	
HONG KONG	2	
KOREA	2	
MEXICO	3	
PORTUGAL	2	
SINGAPORE	3	
SOUTH AFRICA	3	
TAIWAN	4	
VENEZUELA	3	
YUGOSLAVIA	1	
3. LOWER MIDDLE-INCOME ECONOMIES	TOTAL: 4	(3.6%)
COLOMBIA	1	
INDONESIA	1	
THAILAND	1	
ZIMBABWE	1	
4. LOW-INCOME ECONOMIES	TOTAL 4	(3.6%)
INDIA	1	
KENYA	2	
PAKISTAN	1	

developing areas, relative to 1980 estimates of a roughly 75/25 dollar allocation of U.S. investments between industrialized and developing regions (U.S. Department of Commerce, 1981). This participant group displays a 63/37 percent breakdown, calculated on respondents (Dollar comparisons were not possible, as affiliates' asset valuations could not be ascertained).

**Participant self-selection and industry over-representation.**

Closer examination of Table 5.1 calls attention to the dominance of automotive and automotive-related products industries' members in the participant group. Automotive industries' head offices authorized more contacts than any other industries. In addition, the response rate among authorized automotive contacts was above average.

This high representation of the automotive industries arises from self-selection, operating at both the head office and affiliate levels. Although potential participant MNCs were drawn from a random sample of U.S. companies with operations abroad, actual head office and affiliate participants nominated themselves, based upon an invitation and statement of the research problem, (as well as such internal considerations as staff time availability). Self-selection may result in an interaction of selection and treatment (Cook and Campbell, 1979). Such a threat to external validity of a quasi-experiment may result in detection of effects unique to fringe cases. Cook and Campbell give the example of a hypochondriac in a psychological research study.

But the distribution of affiliates across countries suggests that the process, despite volunteerism sampled a broad spectrum of political-economic environments. Self-selection did not seem to bias the participant group toward fringe cases, but rather toward members of a class of subjects of particular interest to the research. The research problem was framed as a effort to assess the influences of governments' industrial strategies on MNCs'

## Chapter 5

external sourcing strategies. The automotive industries have a long history of subcontracting (Helper, 1986; Arnesen, Cole and Krishna, 1987). Because of their size, infrastructural nature and relevance to defense, these industries' global structures and activities' allocations take on a high degree of national political salience (Ballance and Sinclair, 1983; Quinn, 1988).

It seems fair to suggest then, that the double selection effect which loaded the participant group with automotive cases arose from the research's perceived relevance to managerial problems in these industries. It may follow that the research results generalize only to industries in which governments show an extraordinary interest. But the purpose of the research is to study companies in such industries.

Other serious concerns of statistical control, however, attend the mismatch of the participant group's industry breakdown to that of MNCs as a population. As Evans (1981) points out, the attractiveness of MNCs as organizational research subjects resides in two opportunities for comparison. First, MNCs offer opportunities to study similarities among affiliates operating in the same country, but under different international strategies. Second, these offer opportunities to study differences across countries in affiliates operating under the same international strategies. In the outsourcing model of interest here, cross-national sample design holds international strategy constant across affiliates and countries within MNCs. The variable INTERN measures managers' perceptions of their affiliates' cost advantages over external suppliers in a key activity (See Section 5.23). It is included in the model as a control for within-country cross-affiliate variation in organization structure, due to overall cost advantages. (This imperfect match of operationalization to concept results from compromises made to create a tractable questionnaire item). These advantages create the

## Chapter 5

competitive basis for international strategy, here operationalized to hold cross-MNC within-industry strategic differences constant within countries. These elements in the research design may fail to control for differences among industries in average levels of the outsourcing (OUTSRC) and value-added (VALADD) variables. As a result, statistical relationships between countries' political environments and outsourcing may emerge as artifacts of the location of high-outsourcing industries such as automotive in certain countries, rather than as outcomes of within-firm variation.

The statistical sections will report the results of two procedures introduced to address this potential threat to statistical conclusion validity. First, a chi-square test for distributional independence was calculated for mean outsourcing by country and by industry. In addition, results will be reported for an estimation of the model parameters with OUTSRC and VALADD calculated as deviations from their industry means.

### **5.22 Construct validity and reliability.**

Construct validation assesses whether instruments and operationalizations of concepts actually measure the ideas they purport to measure. Reliability concerns the dependability with which instruments order their subjects on magnitudes of variables (Bohrnstedt, 1970; Bagozzi, 1980; Andrews, 1984). This section presents a non-technical discussion of construct validity and reliability as I have applied them in this research, as interrelated issues. Appendix 2 presents some of the technical aspects.

#### **Construct validity**

Business scholars often wish for a common definition in order to discern the degrees to which their research subjects display some property or perceive some aspect of their organizations or environments. But the social sciences

## Chapter 5

lack common definitions of most constructs representing concepts intrinsic to their disciplines. Even when scholars agree on the semantic content of a definition, the words' meanings remain difficult to intersubjectively establish. Operational definitions of measures remain correspondingly elusive. The absence of common definitions corresponding to proven measures necessitates a formal method to assess whether measures of variation on a construct actually represent it, or something else.

Various authors have put forward criteria for construct validation. Campbell and Fiske (1958) proposed the criteria of convergent and discriminant validity. These criteria pertain to the degrees to which observations on different measures converge on or discriminate among respective measures of purportedly similar or dissimilar constructs. Investigators may also assess criterion-related validity on concurrent or predictive bases (Bohrnstedt, 1970). Concurrent validation examines the correlation between a measure and a contemporaneous direct measurement of the same construct. For example, investigators might correlate a scale which measures interest in music with individuals' purchases of recordings. Predictive validation examines the correlation between measures' predictions and actual outcomes, and represents the test of construct validity relied upon in this study.

Predictive construct validation relies on deductive theory. The researcher derives theoretical propositions, develops items which operationalize variables which on their faces correspond to the theory's concepts, and tests hypothetical relationships among the variables. If the hypotheses hold, the researcher may claim predictive validation of the constructs. But the argument for predictive validation displays the weakness that hypotheses may fail of support either due to invalid constructs or incorrect theory.

**The relationship of validity to reliability.**

Researchers may attenuate such ex post ambiguity in predictive validation by proceeding in stages. The first stage establishes reliability; the second predictive validity. Classical test theory defines the reliability of a scale or test as the squared correlation between an observed score on the item (measured with error) and the theoretical true score (measured without error), or equivalently as the correlation between parallel tests of the item. This is equivalent (see Appendix 2) to the ratio of true score variation to observed score variation in a sample, which can be written as unity minus the ratio of error variance to total variance on an item. This may be calculated as the ratio of explained to unexplained variance in a confirmatory factor analysis, which estimates items' regressions on a common underlying latent variable. Latent variable reliability is a composite of the reliabilities of the items included (Lord and Novick, 1968; Bohrnstedt, 1970; Ghiselli, Campbell and Zedeck, 1981; Bagozzi, 1980).

The method of testing for reliability which establishes the internal consistency of operationalizations addresses construct validity and reliability of measures in an interrelated manner. Investigators often test for reliability by dividing the items measuring a variable into two groups, and then checking their correlations. Internal consistency tests examine the intercorrelations of all of the items selected for inclusion in a measure. This amounts to dividing  $n$  items into  $n$  groups. As Bohrnstedt (1970; citing Lord and Novick) points out, the correlations among the items must result from correlation between the items and an underlying construct: hopefully the construct which the investigator hopes to measure. Measures require a high degree of unidimensionality among their constituent items, in order to achieve acceptable reliability according to this criterion. Measures which fail this test are multidimensional and cannot be considered variables (Bagozzi, 1980).



Reliable measures fulfill a necessary condition for construct validity: predictive validation cannot be achieved in their absence. Achieving reliable, valid latent variables may necessitate trimming or adding theoretically-suggested items. Only after concluding this process does it make sense for the researcher to proceed with tests of hypotheses of relationships among the variables which, if supported, will establish their predictive validities. This approach reflects the "holistic construal" for the representation of organization theories (Bagozzi and Phillips, 1982; Bagozzi, 1984). The holistic construal is "neither rigidly deductive (or formalistic) nor purely exploratory. Rather, it subsumes a process by which theories and hypotheses are tentatively formulated deductively and then are tested on data, and later are reformulated and retested until a meaningful outcome emerges" (Bagozzi and Phillips, 1982: 460).

### **5.23 Item selection and reliability tests for latent variables.**

This section discusses the survey instrument (see Appendix 1 for a copy of the questionnaire), the process of selecting items from it to operationalize the latent variables in the model, and any items added or deleted from the variables along with the results of reliability tests.

Reliability testing of proposed confirmatory factor analytic operationalizations of latent variables proceeds by segregating exogenous (X) and endogenous (Y) latent variables into two submodels for confirmatory factor analysis. Running this model of reliability using LISREL produces estimates of the regression coefficients of the items on the factors; the variance-covariance matrix of the latent variables; and the error variance matrix. These estimates provide sufficient information to permit hand calculation of reliability for each constituent item and latent variable according to the formulas in Appendix 2. The section will discuss item selection and reliability for the latent variables in the order INTERN, ILESTAB and SELCON.

### Firm-specific cost advantage (INTERN)

Each survey respondent was asked to address his affiliate's firm-specific cost advantage by considering cost factors favoring or disfavoring subcontracting its highest-cost value chain activity to the most competent local supplier or potential market entrant (See Table 5.5). Qualifying questions ascertained each affiliate's best-selling product category, cost-rankings of value chain activities to produce this product line (from a standard list) and whether the activities take place in the affiliate or elsewhere within the MNC.

Respondents ranked the items on six-step scales with the highest values assigned to circumstances which preclude outside supply, i.e. lack of bidders. Items submitted to confirmatory factor analysis assessed economies of scale ( $X_1$ ), labor costs ( $X_2$ ), inventory costs ( $X_3$ ) and the risk that potential suppliers would become market competitors ( $X_4$ ). Table 5.5 lists these items, their definitions, scales, regression coefficients and t-tests of significance on the underlying factor, item reliabilities and the composite reliability of the latent variable INTERN as operationalized using these items. Figure 5.2 presents the path diagram representing the model of confirmatory factor analysis for INTERN, as submitted to the LISREL computer program.

The chi-square goodness-of-fit test for this confirmatory factor analysis suggests that the model well fits the data for the items selected. The chi-square test in structural equation latent variable analysis provides a test of the null hypothesis that the true covariance or correlation matrix for the phenomenon under investigation is unconstrained. The alternative proposition suggests that the data fit the model as specified well. Investigators, therefore hope for a non-significant chi-square statistic, in order to reject the null and support the alternative hypothesis.

**Table 5.5:** Item selection, item reliabilities and composite reliability for the latent variable representing managerial perceptions of their affiliates' firm-specific cost advantage over potential outside suppliers (INTERN).

**Questionnaire Items:** Cost conditions relevant to contracting in the local market for external supply of the affiliate's highest-cost value chain activity, considering the most competent local supplier or potential market entrant.

$X_1$  Economies of scale.

$X_2$  Labor costs.

$X_3$  Inventory costs.

**Scale (6-part)**

Strongly favor outsider. Moderately favor outsider. No difference.

Moderately favor own operation. Strongly favor own operation.

No supplier would bid.

$X_4$  Risk that supplier would become market competitor if granted a contract.

**Scale (6-part)**

None. Acceptable. Possibly acceptable. Probably unacceptable.

Definitely unacceptable. No supplier would bid.

**Reliability**

	Reg. Coef.	t-stat.	Item Reliability	Composite Reliability
$X_1$	1.000	0.00	.627	
$X_2$	1.210	11.984	.918	.927
$X_3$	1.130	11.055	.802	
$X_4$	1.053	10.009	.696	

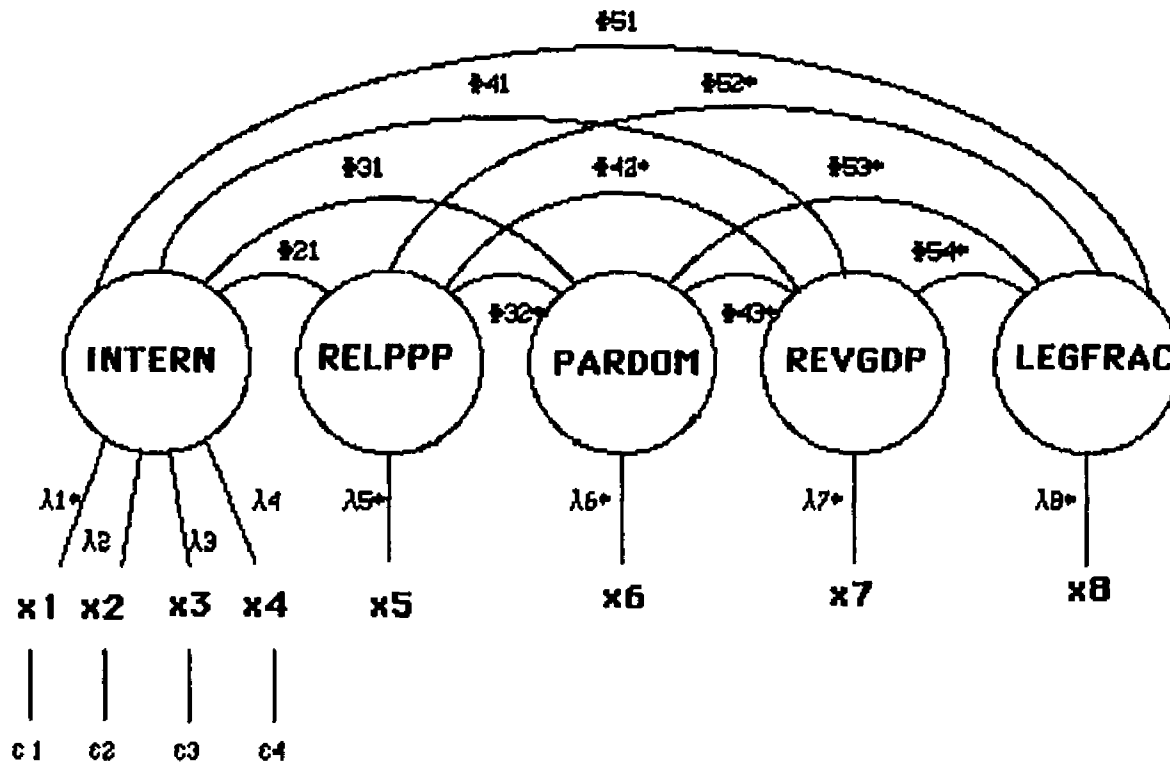
**Overall Goodness-of-fit for x-side reliability model:**

Chi-square (d.f.: 24) 12.90,

p = .968

Goodness-of-fit index: .973

Root mean square residual: .028



\* Denotes constrained parameters

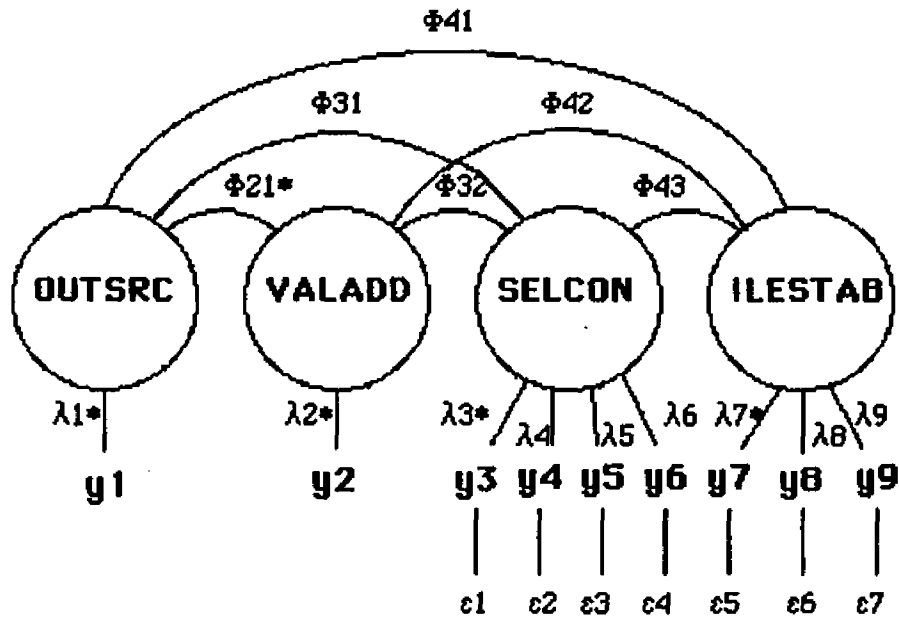
**Figure 5.2:** Path diagram for reliability of X variables. The  $\lambda_i$  represent item regression coefficients on latent and directly-observed variables.  $\phi_{ij}$  represent intercorrelations among the latent variables. The  $e_i$  represent measurement error terms.

Chi-square with 24 degrees of freedom for this operationalization of INTERN is 12.47,  $p=.975$ . The null hypothesis, therefore fails of support. The probability level,  $p$  may be interpreted as the probability that 100 random draws from the set of possible data sets to operationalize the model, would produce a less adequate fit.

This particular operationalization of INTERN achieved composite reliability of .927. Reliabilities of .6 or larger meet conventional standards of adequacy (Bagozzi and Yi, 1988). These also represent unidimensionality sufficient to qualify operationalizations as variables.

**Reliability for the dependent latent variables.**

In order to establish reliability for the dependent variables ILESTAB and SELCON, their operationalizations were submitted together to confirmatory factor analysis. Figure 5.3 presents the path diagram for the confirmatory



\* Denotes constrained parameters

**Figure 5.3:** Path diagram for reliability of y variables. See Figure 5.2 for explanation of notation.

factor analytic model of these variables. The next two sections discuss the operationalizations of ILESTAB and SELCON, in that order.

**Institutional/legal environmental stability (ILESTAB).**

Respondents were asked to assess national institutional legal stability by providing their impressions of the frequency within the preceding five years of various government policy changes which directly, negatively affected their

## Chapter 5

businesses. Respondents were given a five part scale ranging from "never occurred" to "very frequently occurred." This scale was reversed for inclusion in the model. Three items were submitted to confirmatory factor analysis. These included frequencies of:

- 1) unexpected tariff, local content, export quota or other trade regulation changes ( $Y_7$ ).
- 2) loss of business advantage due to government approval delays ( $Y_8$ ).
- 3) supplier unreliability due to government contract problems ( $Y_9$ ).

Table 5.6 lists these items, their definitions, scales, regression coefficients and t-tests of significance on the underlying factor, item reliabilities and the composite reliability of the latent variable ILESTAB as operationalized using these items. The composite reliability of .827 fell within bounds of acceptability.

### **Self-enforcing contracts (SELCON).**

SELCON is intended to measure respondents' perceptions of the importance of self-enforcing contracts in relationships with state-linked suppliers. Qualifying questions ascertained affiliates' externally-supplied value chain activities from the same list used for INTERN, and whether any of these suppliers benefited from state linkages, including government subsidies, loans, loan guarantees, current or past equity ownership, or contracts with government-owned enterprises.

Respondents were asked to evaluate the importance to their relationships with state-linked suppliers of factors which reflected Williamson's (1979) four-category taxonomy of transaction-specific assets (see page 35 of the study). Respondents ordered the factors on a five-part, zero-based scale. If a category of transaction-specific asset or if state-linkages did not factor in the affiliates' local supplier relationships, items were scored zero in the

**Table 5.6:** Item selection, item reliabilities and composite reliability for the latent variable representing managerial perceptions of institutional/legal environmental stability (ILESTAB).

Questionnaire items: Frequency in past five years of:

- Y<sub>7</sub>** Unexpected tariff, local content, export quota or other trade regulation changes.
- Y<sub>8</sub>** Loss of business advantage due to government approval delays.
- Y<sub>9</sub>** Supplier unreliability due to government contract problems.

Scale

Never rarely sometimes frequent very frequent

Reliability

	Reg. Coef.	t-stat.	Item Reliability	Composite Reliability
Y <sub>7</sub>	1.00	0.00	.653	
Y <sub>8</sub>	1.039	8.040	.704	.827
Y <sub>9</sub>	.868	7.172	.492	

Overall Goodness-of-fit for y-side reliability model:

Chi-square (d.f.: 26) 25.33,  
 p = .50  
 Goodness-of-fit index: .955  
 Root mean square residual: .049

data analysis. Remaining scale points reflected the existence and increasing degrees of importance accorded in managers' perceptions to assets in the categories. The following items were submitted to confirmatory factor analysis (parentheses identify the items with Williamson's taxonomy):

- 1) Adjacent facilities (Y<sub>3</sub>; site-related).
- 2) Orders comprising the entire annual output of certain facilities (Y<sub>4</sub>; dedicated).
- 3) Manufacturing personnel's experience using your products (Y<sub>5</sub>; human).

## Chapter 5

- 4) Government job-training programs or credits aimed at processes which make or use the goods traded ( $Y_6$ ; human; added).
- 5) Manufacturing personnel's experience making products for you (removed; human).
- 6) Investments in assets which only make goods for you or use your products (removed; physical).

Table 5.7 lists these items, their definitions, scales, regression coefficients and t-tests of significance on the underlying factor, item reliabilities and the composite reliability of the latent variable SELCON as operationalized using these items.

The data gathered for this study did not support a confirmatory factor analytic model containing items to operationalize all four categories within Williamson's taxonomy. The item to represent physical asset specificity proved inconsistent (not unidimensional) with items representing the other three categories. Physical asset specificity refers to capital goods whose outputs or technology suit only the needs of particular customers. Customers often license the proprietary designs for such equipment to their suppliers.

This element of customer design may create the basis of a difference between suppliers' physical asset specificity and the other three categories within the measurement context of this project. Licensing proprietary designs infuses affiliates' sourcing relationships with risks of technology leakages, as well as exposing them to risks of non-performance in supply agreements per se. Consequently, licensees may enjoy relatively favorable a priori standing with MNCs, compared to suppliers not chosen to receive licenses. In these circumstances, factors such as trust and length of working relationship may play more important roles than asset specificity in assuring performance.

One item representing human asset specificity also needed to be trimmed from the confirmatory factor analysis. Human resources become specific assets



**Table 5.7:** Item selection, item reliabilities, and composite reliabilities for the latent variable representing managerial perceptions of the importance of self-enforcement factors in public-policy-contingent supplier relationship (SELCON).

**Questionnaire items:** use of state-linked\* suppliers and importance of asset specificity in these relationships.

- Y<sub>3</sub>**     Adjacent facilities.
- Y<sub>4</sub>**     Orders comprising the entire annual output of certain facilities.
- Y<sub>5</sub>**     Suppliers' manufacturing personnel's experience using your products.
- Y<sub>6</sub>**     Government job-training programs or credits aimed at processes which make or use the goods traded.

**Trimmed to improve reliability:**

Suppliers' investments in assets which only make goods for you or use your products.

Suppliers' manufacturing personnel's experience making products for you.

**Scale (5-part, zero-based)**

Non-use and/or not a factor. Use and not important. Use and often important.

Use and sometimes critical. Use and often critical.

**Reliability**

	Reg. Coef.	t-stat.	Item Reliability	Composite Reliability
Y <sub>3</sub>	1.000	0.00	.253	
Y <sub>4</sub>	1.338	4.265	.453	.732
Y <sub>5</sub>	1.287	4.197	.419	
Y <sub>6</sub>	1.424	4.353	.513	

**Overall Goodness-of-fit for y-side reliability model:** See Table 5.6.

\*currently or previously partially or completely government-owned; suppliers and customers of government enterprises; government-subsidized; government supplier; direct government or government-guaranteed loan recipient.

over time, as people acquire non-transferable skills particular to given relationships. Two items were submitted to the analysis. The first (3 above) pertained to assemblers of affiliates' intermediate and final products. The second (5), pertaining to employees of completed goods suppliers was trimmed to improve reliability. This item may have proven non-unidimensional because human asset specificity gains relatively more importance over time in relationships with assemblers, as compared to completed goods suppliers. Assemblers provide labor, using their customers' parts. Intermediate or final goods suppliers' outputs embody labor content, but not necessarily customer-supplied parts or equipment. Consequently, assemblers' personnel may spend relatively more time in contact with customers, and rely more heavily on relationship-specific skills.

One item ( $Y_6$ ) was added to establish a direct relationship between government policy and the development of human asset-specificity in suppliers. This item was necessary because time must confer a degree of transaction specificity on all human resources engaged in repeated exchange.

Composite reliability for the latent variable SELCON, with these additions and subtractions was .732. The Chi-square goodness-of-fit test for the entire Y-side confirmatory factor analysis (including OUTSRC, VALADD, ILESTAB and SELCON) was 25.33, d.f. 26. This finding rejected the hypothesis of an unconstrained model at a probability level of .50.

#### **5.24 Managerial estimates of outsourcing (OUTSRC) and value-added (VALADD).**

The model treated outsourcing and affiliate value-added as variables capable of direct observation via single indicators. The estimation procedure treats such variables as measured without error: in effect, as true scores. Reliabilities therefore, could not be calculated. The questionnaire survey

## Chapter 5

requested managerial estimates to operationalize these variables, and provided formulas. The formula for value-added is:

$$V = \frac{S - C}{S}$$

where V represents Affiliate Value-added, C represents affiliate costs for materials, and S represents affiliate total sales. The questionnaire directed respondents to include as part of costs, any intrafirm remittances for inputs supplied by other units of their parent MNCs.

The formula for outsourcing is:

$$O = \frac{DC}{C}$$

where O represents outsourcing, DC represents domestic costs exclusive of employees' wages, and C represents affiliates' total costs.

### **5.25 Conclusion of field survey and measurement discussion.**

This concludes the discussion of issues pertaining to the measurement model. Combined with the discussions of observable political indicators of Chapters 3 and 4, this section completes the treatment of data to operationalize the model and test the main hypotheses in the study. Inferences about these constructs' predictive validities as measured, as well as of the validities of managerial estimates of directly-observed operationalizations of outsourcing and value-added may be drawn from LISREL estimation results for the combined structural equation and measurement model. The next sections of the chapter discuss the estimation procedure and results.

### **5.3 Estimation procedure and results.**

This section reports the results of LISREL estimation of the combined structural equation and measurement model parameters. The section has five

## Chapter 5

sections. Section 5.31 discusses the estimation technique. Section 5.32 discusses sample size. Section 5.33 discusses results, in two subsections. 5.33.1 presents results of model estimation using unadjusted managerial estimates as reported for outsourcing (OUTSRC) and value-added (VALADD). Section 5.33.2 discusses results when these data are adjusted as percentage standard deviations from their industry means. Section 5.33.3 discusses and compares the two sets of parameter estimates, and reports the results of a chi-square test of statistical independence between industry mean outsourcing and country mean outsourcing. Section 5.34 discusses disconfirmatory findings in the model estimation procedure, as well as some alternative explanations for the results.

### 5.31 Estimation technique and statistical assumptions.

Joreskog and Sorbom (1984: I.5 - I.9) define the general structural equation model with latent variables operationalized in the LISREL program, with these equations and assumptions:

$$\eta = \beta \eta + \Gamma \xi + \zeta \quad \text{(Structural equation model)}$$

where all variables are measured as deviations from their means; where  $\eta$  and  $\xi$  represent random vectors of latent dependent and independent variables,  $\beta$  ( $m \times n$ ) and  $\Gamma$  ( $m \times n$ ) are coefficient matrices and  $\zeta = (\zeta_1 \zeta_2 \dots \zeta_m)$  represents a random vector of residuals comprising equation error. Researchers do not observe the  $\eta$  and  $\xi$  vectors. Instead, they observe  $y$  and  $x$  vectors, such that:

$$y = \lambda y \eta + \varepsilon \quad \text{(Measurement model for } y \text{)}$$

$$\underline{x} = \lambda_x \underline{\xi} + \underline{\delta} \quad (\text{Measurement model for } x)$$

where  $\underline{\epsilon}$  and  $\underline{\delta}$  are measurement error vectors in  $y$  and  $x$ , respectively.

$\lambda_y$  ( $p \times m$ ) and  $\lambda_x$  ( $q \times n$ ) represent regression matrices of  $y$  on  $\eta$  and  $x$  on  $\xi$ . These assumptions govern the model:

- 1)  $\underline{\zeta}$  is uncorrelated with  $\underline{\xi}$
- 2)  $\underline{\epsilon}$  is uncorrelated with  $\eta$
- 3)  $\underline{\delta}$  is uncorrelated with  $\xi$
- 4)  $\underline{\zeta}$ ,  $\underline{\epsilon}$  and  $\underline{\delta}$  are mutually uncorrelated.
- 5)  $\beta$  has zeros on the diagonal and  $I - \beta$  is non-singular.

The estimation procedure employed LISREL VI (Joreskog and Sorbom, 1984) as a user program within SPSSX (SPSS, Inc., 1986). LISREL uses iterative techniques to simultaneously estimate both measurement and equation parameters of many different types of models. The program uses correlation or covariance matrices as input. The method of calculation for correlation matrices depends on the estimation technique chosen for the model parameters. Full information maximum likelihood (FIML) estimation assumes the observed variables have multivariate normal distributions, and uses Pearson matrices. The technique of unweighted least squares (ULS) does not require the normality assumption. ULS uses polychoric correlation matrices as input.

Both ULS and ML techniques minimize functions which fit observed covariance or correlation matrices to the covariance or correlation matrix implied by models. This section presents results from applying both techniques to the data gathered for this project, because the normality assumption may be inappropriate with questionnaire data using ordinal rather than interval scales. Large departures from normality render calculations of

## Chapter 5

standard errors and chi-square statistics inaccurate. As a result, tests of significance become unreliable.

Researchers, nevertheless often assume continuous, normally-distributed variables underlie the observed data and to paraphrase Wainer and Thissen (1976), proceed on their merry way. This seems more reasonable, in consideration that skewed variables cause underestimates of regressions on factors and overestimates of chi-square (Olsson, 1979). As a result, tests of significance become less likely to accept null hypotheses, while goodness-of-fit tests become more likely to reject the model. Inappropriate assumptions of normality may, therefore err on the side of conservatism. Boomsma (1982) concurs. Tanaka (1987), however, dissents and suggests that erroneous normality assumptions may introduce either Type I or Type II errors.

Techniques which generate statistics for non-normal significance tests (for example, sample-and-replacement methods such as bootstrapping, blindfolding or jackknifing) remain controversial. These have not been explored sufficiently to make known their statistical properties and limitations (Tanaka, 1987). In acknowledgement of these problems, the analysis presented in this study reports both ML and ULS parameter estimates. Readers will notice that the values of estimates turn out to be in general, quite close and sometimes identical. Violations of normality assumptions often associate with such analytic anomalies as extremely-large parameter estimates, negative variances and non-significant error variances (Bagozzi and Yi, 1988). But none of these appeared in the procedures conducted for this analysis. Nevertheless, users of this research should regard the ML significance and goodness-of-fit tests with caution.

### 5.32 Sample Size

Sample size also remains a controversial issue in structural equation modeling with latent variables. The assumptions underlying the technique rely on asymptotic statistical theory. Researchers can confidently draw conclusions from their estimations of these models therefore, only as sample size increases without bound. These problems become more acute in estimation procedures which dispense with distributional assumptions (Bentler, 1985; Tanaka, 1987). Evidence on the precise sample sizes necessary for reliable results remains sketchy and particularized to specific models whose properties have been evaluated using Monte Carlo techniques. Tanaka's 1987 review suggested that agreement exists among researchers that criteria should include some kind of subjects-to-parameters ratio guideline. His (1985) rule of thumb specified three subjects per model parameter if LISREL is to be employed. Bentler (1985) suggests a rule of thumb of five-to-one under normality assumptions, and ten-to-one for arbitrary distributional assumptions. Bagozzi and Yi (1988) suggest that sample sizes as small as 100 often prove adequate. Walker and Weber (1984) estimated their 37-parameter model with a sample size of 60, or less than two subjects per parameter.

Other researchers have offered other heuristics. Boomsma (1982) ran a Monte Carlo study of LISREL estimates of parameter estimates and goodness-of-fit statistics for a dozen two-factor, 6- and 8- indicator models. She found almost no bias in parameter estimates for sample sizes above 100, with eight-indicator models outperforming the smaller set-ups. She also found satisfactory results for confidence intervals, under the same conditions. Boomsma concluded, however, that sample sizes under 100 may not provide sufficient statistical power for the chi-square test of model fit, in the classes of models in her experiment. Yet use of the chi-square goodness-of-

fit test exposes the researcher to a double bind. As it varies directly with sample size, the chances that it will reject any model approach 1, as sample size increases. This did not present a difficulty in the present study. Chi-square statistics fell well within the range of acceptability.

Tanaka suggests that chi-square may not provide an appropriate measure of fit for these models, however, as it lacks robustness under the violations of multivariate normality which typify them. But Boomsma's (1982) results suggest that errors tend to cause true models more often to be rejected, than false ones accepted. Joreskog suggested (1974) that analysts assess structural equation models for fit against a range of competing, nested alternatives. Joreskog and Sorbom's program reports their own Adjusted Goodness of Fit Index, which does not rely on any distributional assumptions. But this statistic's distribution is unknown.

The parameter estimates reported here resulted from model runs performed with a sample size of 111, estimating 53 parameters. This sample size proved adequate in execution.

### **5.33 Overall results.**

Tables 5.8 through 5.11 present four different sets of parameter estimates. These include the results of both ULS and ML estimation procedures for each of two data sets which differ only in their operationalizations of OUTSRC and VALADD. Tables 5.8 and 5.9 present the model estimates for the latter variables as directly operationalized from respondents' estimates. Tables 5.10 and 5.11 present the model estimates when these variables are operationalized as percentage standard deviations of respondents' estimates from their industry means. The second set of estimates were undertaken in an attempt to control for differences in average levels of OUTSRC and VALADD by



Table 5.8 LISREL Estimation: Without industry mean correction (Maximum Likelihood Estimation)

STRUCTURAL EQUATION PARAMETERS (Unstandardized)

Dependent Variable	Independent Variables	VALADD	SELCON	ILESTAB	INTERN	PARDOM	REVGDP	LEGFRAC
OUTSRC		.153 (1.631)	.395 (2.473)*	--	-.299 (-2.411)*	-.006 (-.059)	-.269 (-2.814)*	.065 (.659)
VALADD		--	-.329 (-1.487)	-.164 (-.717)	.343 (2.683)*	.199 (1.656)	-.087 (-.763)	.125 (1.217)
SELCON		--	--	-.636 (-4.178)*	.096 (1.034)	.233 (2.958)*	.187 (2.329)*	-.071 (-.925)
ILESTAB		--	--	---	.114 (1.275)	.217 (3.048)	.210 (2.837)*	.171 (2.334)*

MEASUREMENT MODEL PARAMETERS

Latent Variable	Questionnaire Item	Y3	Y4	Y5	Y6	Y7	Y8	Y9	X1	X2	X3	X4
-----------------	--------------------	----	----	----	----	----	----	----	----	----	----	----

SELCON .718 1.000 .921 .962  
(4.425) (0.00) (5.428) (5.591)

ILESTAB 1.153 1.171 1.000  
(7.407) (7.465) (0.0)

INTERN 1.000 1.217 1.133 1.055  
(0.0) (11.969) (10.99) (9.959)

MEASURES OF OVERALL GOODNESS-OF-FIT

Chi Square (X<sub>2</sub>) (deg. fr. 88) = 97.93  
Probability level = .22  
Goodness-of-fit Index = .908  
Adjusted Goodness-of-fit Index = .857  
Root mean square residual = 0.053

Total Coefficient-of-Determination for structural equations: (R<sup>2</sup>) = .489  
Notes follow last table

Table 5.9 LISREL Estimation: Without Industry mean Correction (Unweighted Least Squares)

STRUCTURAL EQUATION PARAMETERS (Unstandardized)

Dependent Variable	Independent Variables	ILESTAB	INTERM	PARDOM	REVGDP	LEGFRAC
OUTSRC	VALADD SELCON VALADD .19	--	-.354	-.041	-.316	.062
VALADD	--	-.201	.382	.213	.126	.131
SELCON	--	-.660	.191	.254	.249	-.090
ILESTAB	--	--	.175	.286	.275	.228

MEASUREMENT MODEL PARAMETERS

Latent Variable	Questionnaire Item	Y3	Y4	Y5	Y6	Y7	Y8	Y9	X1	X2	X3	X4
SELCON		.777	1.000	.780	1.013							
ILESTAB						.931	.967	1.000				
INTERM									1.000	1.177	1.176	1.087

MEASURES OF OVERALL GOODNESS-OF-FIT

Goodness-of-fit Index = .977  
 Adjusted Goodness-of-fit Index = .934  
 Root mean square residual = .057

Total Coefficient-of-Determination for structural equations: (R<sup>2</sup>) = .524  
 Notes follow last table

Table 5.10 LISREL Estimation: LOCSOURC and VALADD as deviations from industry means (Maximum Likelihood Estimation)

STRUCTURAL EQUATION PARAMETERS (Unstandardized)

Dependent Variable Independent Variables

	VALADD	SELCON	ILESTAB	INTERN	PARDOM	REVGOP	LEGFRAC								
OUTSRC	.13 1.447	.282 (1.825)**	-----	-.147 (-1.226)	.090 (.984)	-.322 (-3.381)*	.091 (-.924)								
VALADD	-----	-.02 (-.092)	-.067 (-.287)	.255 (1.966)**	.093 (.8)	.099 (.849)	.073 (.692)								
SELCON	-----	-----	-.627 (-4.124)*	.094 (1.021)	.229 (2.922)*	.186 (2.331)*	-.073 (-.959)								
ILESTAB	-----	-----	-----	.113 (1.271)	.216 (3.038)*	.210 (2.840)*	.170 (2.323)*								

MEASUREMENT MODEL

Parameters	Latent Variable	Questionnaire Item	Y3	Y4	Y5	Y6	Y7	Y8	Y9	X1	X2	X3	X4
SELCON			-.732 (4.433)	1.000 (0.0)	.936 (5.388)	.965 (5.496)	1.154 (7.381)	1.177 (7.455)	1.000 (0.0)	1.000 (0.0)	1.214 (11.961)	1.133 (11.015)	1.055 (9.976)
ILESTAB													
INTERN													

MEASURES OF OVERALL GOODNESS-OF-FIT

Chi Square ( $X^2$ )(deg. fr. 88) = 94.06  
 Probability level = .31  
 Goodness-of-fit Index = .909  
 Adjusted Goodness-of-fit Index = .743  
 Root mean square residual = .053  
 Total Coefficient-of-Determination for structural equations: ( $R^2$ ) = .471  
 Notes follow last table.

Table 5.11 LISREL Estimation: LOCSSOURC and VALADD as deviations from industry means (Unweighted Least Squares)

STRUCTURAL EQUATION PARAMETERS

Dependent Variable Independent Variables

Dependent Variable	VALADD	SELCON	ILESTAB	INTERN	PARDOM	REVEDP	LEGFRAC
OUTSRC	.128	.255	-----	-.165	.061	-.363	.096
VALADD	-----	.048	-.007	.25	.083	.09	.086
SELCON	-----	-----	-.656	.185	.246	.249	-.096
ILESTAB	-----	-----	-----	.169	.280	.276	.223

MEASUREMENT MODEL PARAMETERS

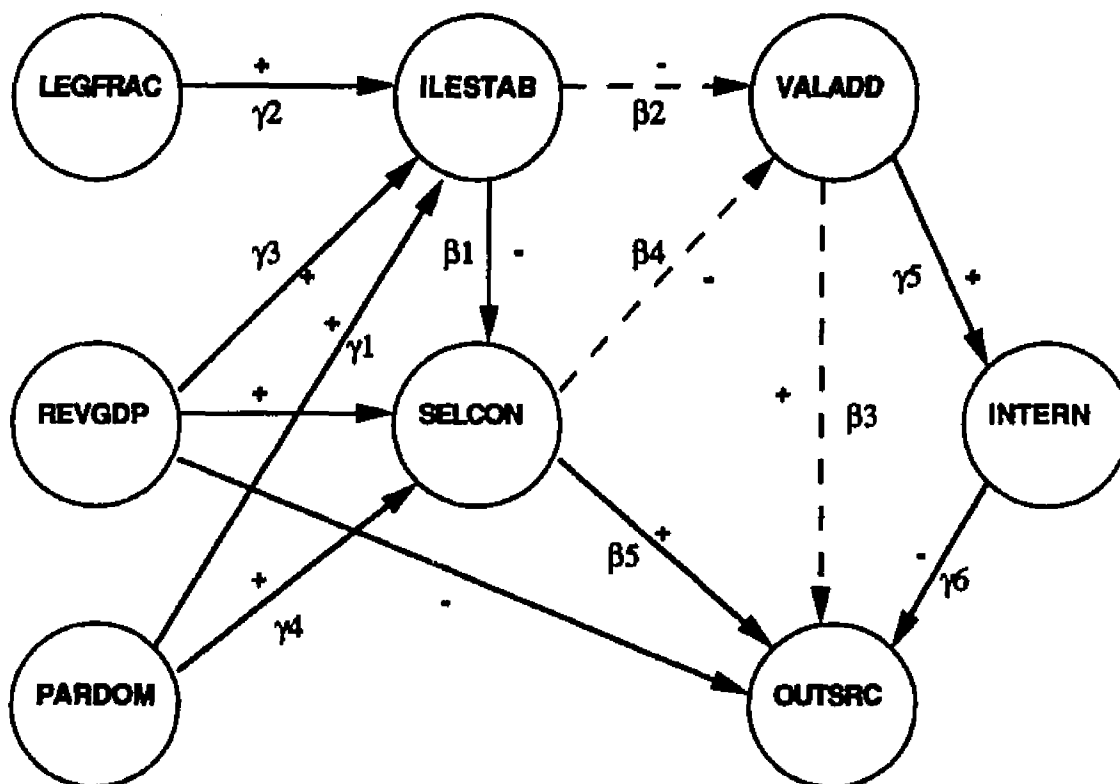
Latent Variable Questionnaire Item

Latent Variable	Y3	Y4	Y5	Y6	Y7	Y8	Y9	X1	X2	X3	X4
SELCON	.791	1.000	.781	1.002							
ILESTAB					.937	.979	1.000				
INTERN								1.000	1.172	1.183	1.091

MEASURES OF OVERALL GOODNESS-OF-FIT

Goodness-of-fit Index = .977  
 Adjusted Goodness-of-fit Index = .935  
 Root mean square residual = .056  
 Total Coefficient-of-Determination for structural equations: (R<sup>2</sup>) = .49  
 Notes follow.

\* Significant at .05 probability level; d.f. 88.  
 \*\* Significant at .10 probability level; d.f. 88.

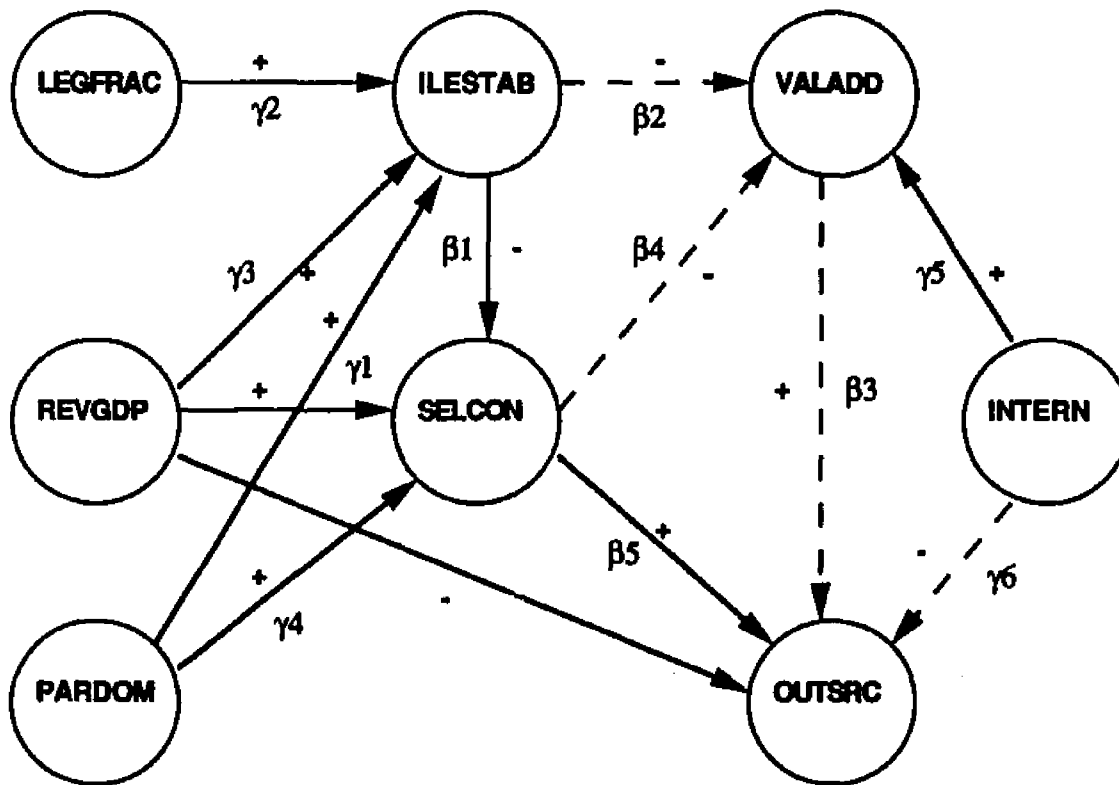


**Figure 5.4:** Path diagram of estimated structural equation model. Dotted lines represent non-significant hypothesized paths. Solid lines represent significant coefficients at  $p=.10$ . OUTSRC and VALADD are operationalized using data as reported by respondents.

industry. In all cases, these estimates include regression coefficients on the structural paths, regression coefficients for the observed indicators on the latent variables, and error terms. Significance tests are also shown for the ML estimates, as well as goodness-of-fit statistics for both ML and ULS estimates of the model parameters.

Figures 5.4 and 5.5 present path diagrams of the respective estimated models showing confirmed hypothesized non-zero paths; disconfirmed hypothesized paths; and hypothesized zero paths which proved to be

significant. The two model versions differed in the results which they returned for firm-strategic variables, but not in their results for the variables representing political environments and managers' perceptions of political environments.



**Figure 5.5:** Path diagram of estimated structural equation model. Dotted lines represent non-significant hypothesized paths. Solid lines represent significant coefficients at  $p < .10$ . OUTSRC and VALADD are operationalized using data modified as percentage deviations from industry means.

In the interests of comprehensibility, Tables 5.8 - 5.11 eschew the convention of reporting structural equation model/latent variable results identified by their greek symbols and matrices within the LISREL computer program. The tables of equation parameters present the regression

coefficients of the independent variables as they enter each of the four equations identified by their left-hand side variables. T-statistics appear in parentheses for the ML estimates. Measurement model parameters are shown as regression coefficients of the observed items on the underlying latent variables, or factors. In conventional notation, structural equation regression weights of endogenous variables are represented by the matrix of Beta coefficients, and of exogenous variables by the matrix of Gamma coefficients. Regression coefficients within the measurement model are referred to as  $\Lambda_x$  or  $\Lambda_y$ .

### **5.33.1 Parameter estimates of model using unadjusted OUTSRC and VALADD.**

#### **Fit of the model's internal structure.**

Tables 5.8 and 5.9 present ULS and ML estimates of coefficients and relevant test statistics for all paths to which hypotheses were applied in Chapter 4, including those predicted to be zero, but not constrained as such. The discussion will focus first on ML estimates and their significances, before broadening to incorporate the ULS procedure.

Results of this estimation procedure supported the main contentions of the study. The directly-observed political/environmental variables, PARDOM, REVGDP and LEGFRAC entered the equation for ILESTAB in the predicted significant, positive relationships. ILESTAB, in turn entered the SELCON equation negatively, with a very high t-statistic (4.178; the approximate value,  $t \geq 1.99$  is required for significance with a sample size of  $n = 111$ ). This finding supports the key hypothesis of a negative relationship between institutional/legal environmental stability, and managers' perceptions of the importance of asset specificity augmenting the self-enforcing factors in public-policy-contingent supply contracts. PARDOM entered the SELCON equation with a positive, significant coefficient, as predicted, establishing

## Chapter 5

the expected relationships between state-dominant, interventionist development approaches and the importance of such relationships. But REVGDP also proved unexpectedly significant, with positive sign in this equation. This finding will receive discussion in the last part of this section.

The equation for VALADD performed relatively poorly compared to the other equations in the system. Contrary to expectation, SELCON proved non-significant, and of opposite sign to that expected. The estimate of the coefficient on ILESTAB also proved not to differ significantly from zero. INTERN, however, displayed a positive, significant coefficient. Chapter 4 argued that such a finding must definitionally combine with a significant, negative coefficient on OUTSRC, if managerial estimates of VALADD and OUTSRC are to be considered valid. Estimates of the coefficient on INTERN in the OUTSRC equation proved consistent with the latter expectation.

The key expected finding in the OUTSRC equation was confirmed, as SELCON entered the equation significantly with positive sign. This finding suggests confirmation for the idea that self-enforcing contracts associate with increased outsourcing. This relationship, in turn may tentatively support the idea that self-enforcement mechanisms can help governments overcome MNCs' reticence to accept incentives to cooperate in state economic strategy implementation, when this reticence arises from a sense of uncertainty derived from past negative experiences with the government. If so, the use of such contractual forms may provide evidence of governments' impacts on MNCs' strategies. In addition to the expected relationships of INTERN and SELCON to outsourcing, REVGDP unexpectedly entered this equation with a negative sign and relatively large (2.814) t-statistic. This finding will receive discussion in Section 5.34. VALADD demonstrated the expected positive sign in the OUTSRC equation, but fell just short of significance at the .10 probability level.



Table 5.9 presents ULS estimates of the unadjusted data model. LISREL does not calculate significance tests for its ULS parameter estimates. The coefficients in Table 5.9 may, however, be examined for their closeness to the unstandardized ML estimates. The ULS estimates proved in all cases to be larger than and/or extremely close to their ML counterparts. Correlation of these alternative parameter estimates is .97, an indication of near-equivalence. Clearly these parameter estimates proved relatively robust across the two methods, for this particular data. Furthermore, the general direction of differences between the estimates indicated attenuation of the ML estimates as compared to ULS. Such a finding corresponds to reported data and experiences of Olsson (1979), Boomsma (1982) and Bagozzi and Yi (1988), regarding attenuation of parameter estimates under violations of assumptions of normality.

#### **Overall model fit.**

Tables 5.8 through 5.11 report the results of goodness-of-fit tests for the overall model following the reports of coefficient values in Tables 5.8 through 5.11. These statistics include chi-square, Joreskog and Sorbom's *goodness-of-fit* (GFI and AGFI) indices, root mean square residual (RMR) and the coefficient of determination. The chi-square test statistic is a function of the summed, squared differences between expected values of variables implied by models, and values observed in actual data (See Hoel, Port and Stone, 1971, or other standard text). In structural equation models with latent variables, this amounts to a function of the summed, squared differences between the covariance matrix implied by the specified model, and the matrix implied by the observed data (Long, 1983). Larger values of chi-square therefore, represent poor fit: the less significant the statistic proves to be, the better. The statistical distributions of GFI indices remain

## Chapter 5

unknown, although their values remain robust with non-normal data distributions. Root mean square residuals are averages of the residual variances and covariances. The coefficient of determination corresponds to  $R^2$  for the equation system for the matrix of dependent variables. This measure represents the proportion of variance in the dependent variables explained by the independent variables.

Statistics reported for these measures suggest that both ML and ULS parameter estimation produces an adequate fit of the model to the data. ML estimation produced a chi-square of 97.93, significant with 88 degrees of freedom at a probability level of .22. This test rejects the hypothesis that the data imply an unconstrained covariance matrix, in favor of the alternative that the model represents the data well. Chi-square does not provide an appropriate measure of goodness of fit for ULS estimation. AGFI (GFI adjusted for degrees of freedom) was .857 for the ML estimated model, and .934 for ULS estimation. Bagozzi and Yi (1988: 79) suggest that AGFI levels of "about .9" suggest meaningful models from a pragmatic (but conservative) point-of-view. RMR for the ML model was .053, but increased to .057 for ULS. The coefficients of determination were .489 for ML and .524 for ULS. These comparisons suggest that ULS, in general improves the fit of model to data. But standards of comparison have yet to be developed for these relative measures.

### **5.33.2 Parameter estimates with industry-mean-adjusted OUTSRC and VALADD.**

The second fit of the model replaces respondents' reported levels of value-added (VALADD) and outsourcing (OUTSRC) with values of these variables as percentage standard deviations from their industry means. This adjustment was undertaken in an attempt to control for differences in average levels of these variables across industries (See Tables 5.12 and 5.13). Failure to

## Chapter 5

control for such differences substantially weakens the findings, in light of several alternative interpretations and objections. First, relationships which emerged in the data may represent chance artifacts of the distribution of high- versus low-outsourcing industries across countries, rather than evidence of variation within companies. This objection arises because the respondent group is small, resulted from a non-random selection process, and not all MNCs were represented in all countries. Given this problem, the failure to control for industry differences could render the findings uninterpretable at the level of analysis of MNCs' international strategies. Conclusions about the capabilities of states to change MNCs' strategies would be at best, suspect.

The second consideration concerns statistical bias, which could cast suspicion on other conclusions from the model, as well. Full information maximum likelihood estimation (FIML) of multiple equation systems estimates all parameters simultaneously, unlike such limited information procedures as two-stage least squares, which estimate equations separately. Consequently, misspecification of any equation in the system can bias all other parameters (Long, 1983). If the equations for VALADD and OUTSRC lack appropriate statistical controls for industry differences, the misspecification biases the estimates of parameters in the equations for SELCON and ILE, as well.

This leads to a third consideration. Other variables in the model may correlate with industries' baseline outsourcing levels in such a way as to threaten the validity of conclusions from the model. In particular, a positive relationship between self-enforcing contracts (SELCON) and outsourcing could arise in relationship to size of contracts for technical, rather than enforcement reasons. Certain industries' technology, scale characteristics, and capital intensity may innately require suppliers to

Chapter 5

**Table 5.12:** Mean and standard deviation of value-added by industry. Source: field study.

	MEAN	STD DEV	CASES
	-----	-----	-----
FOR ENTIRE POPULATION	46.0766	19.7717	111
FOR INDUSTRY			
ADHESIVES	57.6667	17.6937	6
AUTO PARTS	56.8333	12.4365	6
AUTOMATION	37.6000	14.1880	5
AUTOMOBILES	36.9920	22.6801	25
COMPUTERS	41.1250	17.0728	8
ELECTRIC DEVICES	58.7336	21.1839	7
ELECTRIC MOTORS	35.0000	7.0711	2
FASTENERS	49.0200	34.5406	5
FILTRATION	43.6907	12.1794	7
HEAVY TRANSPORT	40.7500	2.9861	4
PHARMACEUTICAL	44.6412	10.6227	13
SECURITY	72.5000	3.5355	2
SPECIALTY MATERIALS	44.4600	28.2260	5
TIRE & RUBBER	64.3250	24.7108	4
TOILETRIES	48.8083	13.8657	12

**Table 5.13:** Mean and standard deviation of local sourcing by industry. Source: field study.

	MEAN OUTSOURCING	STD DEV	CASES
	-----	-----	-----
FOR ENTIRE POPULATION	45.0451	27.2484	111
FOR INDUSTRY			
ADHESIVES	35.8333	36.3011	6
AUTO PARTS	31.7000	17.7074	6
AUTOMATION	35.6000	27.0056	5
AUTOMOBILES	43.5280	28.5800	25
COMPUTERS	28.6545	20.8876	8
ELECTRIC DEVICES	46.7526	26.4845	7
ELECTRIC MOTORS	60.0000	.0000	2
FASTENERS	50.4536	18.0025	5
FILTRATION	51.4429	13.3756	7
HEAVY TRANSPORT	75.0000	19.6977	4
PHARMACEUTICAL	36.5643	22.4340	13
SECURITY	67.5000	38.8909	2
SPECIALTY MATERIALS	42.6000	35.4796	5
TIRE & RUBBER	48.0000	34.7563	4
TOILETRIES	60.3667	30.8105	12

employ dedicated, site- and/or physically-specific assets. Dedicated and site-specific assets, in particular must often associate with high-volume operations. If so, evidence of a relationship between SELCON and OUTSRC could

still arise as a consequence of a coincidence of the distribution of respondent group members across countries. If the respondent group constituted a large, random sample, it might be argued that such uncontrolled differences average out across countries (See Cook and Campbell, 1979). It could also be argued that the political forces which the study argues operate at company levels, instead influence country patterns of participation and non-participation in international industries. This difficulty might also be attenuated in a small sample, if despite non-randomness in the participant selection process, each country in the sample had a representative of each industry. Given economic specialization by countries, however, such a sample seems unlikely to emerge in any participant selection process, as only the largest countries have broad industry representation. But random selection of a sufficiently large sample would theoretically assure that each country had representatives of high, medium and low-outsourcing industries even if these were not the same industries in each.

#### **Fit of the model's internal structure.**

Estimation of the model parameters with the adjusted VALADD and OUTSRC data did not alter the signs of any of the relationships as reported in the previous section (See Tables 5.10 and 5.11). Differences in the the parameter estimates for the ILESTAB and SELCON equations were too small to merit discussion. Two patterns of change in parameter magnitudes and significance in the OUTSRC and VALADD equations, however, require comment.

First, the coefficients on INTERN diminished substantially in magnitude and became non-significant in both equations. Second, all of the explanatory variables in the VALADD equation diminished in magnitude and significance, while some in the OUTSRC equation improved. VALADD also diminished in significance in the OUTSRC equation from just under significant at .10

## Chapter 5

probability level to a substantially lower level. SELCON also diminished in magnitude as an explanatory variable in OUTSRC, but remained significant at better than the .10 level. Other variables increased in magnitude but did not become significant. REVGDP, already significant, increased substantially in negative magnitude and significance in this equation.

Among these developments, the change in INTERN's significance is easiest to explain, as it had been expected. INTERN was specified to operationalize firm-specific cost advantage, to control for cross-industry and cross-company within-country strategic differences. But this operationalization confounded intra- and interindustry differences. If interindustry differences are removed from dependent variables, then these no longer exist as elements to be explained. It might be added that intra- and interindustry differences are equivalent for a good part of the respondent group, as most industries contained respondents from only one MNC.

The overall deterioration in the already poorly performing VALADD equation creates a more troubling task for explanation. It suggests that interindustry differences account for a non-trivial amount of the variation in the managerial estimates of affiliate value-added reflected in this data, and also that the equation as written in the model does little to explain the remainder. Consequently, the prediction of VALADD used in the equation for OUTSRC also performs poorly.

### **Overall model fit.**

Comparison of overall model fit between the adjusted and unadjusted models reveals little difference between the two. Chi-square diminishes in significance, to 94.06, d.f. 88,  $p=.31$  from 97.93, d.f. 88,  $p=.22$ . But this should be expected, as the change from reported data to deviations attenuates relationships involving the changed variables, in the matrix to be analyzed.

AGFI and RMR statistics were essentially identical in the ULS estimates for adjusted and unadjusted models. The coefficient of determination diminishes in ULS from .524 to .49. Given the results of these tests, it cannot be stated that the two different data sets differ much in their fit of the model.

**A test of statistical independence of countries and industries.**

Given the ambiguity of the comparison between the model estimates and overall fit using unadjusted and adjusted OUTSRC and VALADD, it would be useful to have the result of some other test which clearly indicates the approach to be chosen. Clearly, the optimum approach would be to directly operationalize industry differences as an explanatory variable, and compare the models on the basis of difference of chi-square statistics. Such an application of chi-square for multiple-equation systems is analogous to an application of the F-statistic for comparisons of different constraints on single regressions (Long, 1983). Unfortunately, no data other than INTERN was gathered for this study to operationalize industry differences.

Another application of the chi-square distribution, however, permits testing whether two variables which have been classified into contingency tables are independent random variables (see Hoel, Port and Stone, 1971: 96-99). Application of this test can suggest whether classifications of respondents and countries behave like independent random variables. For purposes of the present question, respondents needed to be cross-classified into groups according to industry and country mean outsourcing (See Tables 5.12; 5.14). The number of groups was arbitrarily chosen as four, in order to reasonably assure that each cell of the contingency table would contain the five respondent minimum necessary for the test. The middle two groups were defined as members of industries with mean outsourcing one-half standard deviation on either side of the grand mean of the industry and country mean

Chapter 5

outsourcing variables. High and low groups fell above and below these cutoffs.

Table 5.15 presents the four-by-four contingency table of respondents and countries cross-classified as discussed above. The chi-square test of whether these two variables behave as random, independent variables requires calculation of the expected values of the cell contents. The expected value of the contents of each cell  $ij$  may be calculated using sample data as the product of the marginal frequencies of row  $i$ , column  $j$  divided by  $N$ , where  $N$  equals the total of respondents (See Hoel, Port and Stone, 1971 or any standard statistics text). Given this information,

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(n_{ij} - \frac{n_i n_j}{n})^2}{\frac{n_i n_j}{n}} \quad ; \quad \frac{n_i n_j}{n} = e_{ij}$$

is distributed as chi square, where  $n_{ij}$  equals the sample cell frequency, and  $e_{ij}$  equals the expected cell frequency for the  $ij$ th cells. If the statistic is small, this supports the hypothesis that the two classifications behave as independent, random variables. If large, the hypothesis is rejected.

Calculation of chi-square according to the formula above for the industry and cross-country classification of respondents yields a value of 7.058. With 9 degrees of freedom,  $p = .6310$ . The statistic, therefore is non-significant by a wide margin, and the hypothesis that the two distributions of mean outsourcing by country and industry behave as random, independent variables is accepted.



Chapter 5

**Table 5.14:** Mean and standard deviation of local sourcing by country. Source: field study.

		MEAN OUTSOURCING	STD DEV	CASES
		-----	-----	-----
FOR ENTIRE POPULATION		45.0451	27.2484	111
FOR COUNTRY	INDONESIA	98.0000	.0000	1
	ARGENTINA	79.3333	1.1547	3
	KOREA	75.0000	21.2132	2
	BRAZIL	69.7143	15.9030	7
	MEXICO	68.3333	33.2916	3
	JAPAN	62.8800	26.5249	5
	ZIMBABWE	62.0000	.0000	1
	YUGOSLAVIA	55.7000	.0000	1
	U.K.	53.4268	30.3973	10
	FRANCE	51.7000	37.5256	3
	SOUTH AFRICA	51.3333	35.6417	3
	HONG KONG	50.1340	6.8816	2
	INDIA	50.0000	.0000	1
	SPAIN	49.7113	31.4925	6
	TAIWAN	49.5500	24.3700	4
	DENMARK	45.2680	.0000	1
	AUSTRALIA	42.0000	33.1738	5
	CANADA	40.9000	34.0577	3
	PORTUGAL	40.0000	14.1421	2
	NEW ZEALAND	40.0000	20.4124	4
	GERMANY	35.7500	27.2646	8
	U.S.A.	34.2113	19.2078	6
	BELGIUM	31.3750	25.0844	4
	SWEDEN	30.0893	21.8871	3
	ITALY	29.5000	15.7797	4
	VENEZUELA	29.0000	20.6640	3
	KENYA	28.5000	2.1213	2
	NETHERLANDS	28.3333	29.0230	3
	COLOMBIA	28.0000	.0000	1
	SINGAPORE	26.6667	29.2973	3
	IRELAND	26.3000	.0000	1
	SWITZERLAND	22.5000	24.7487	2
	THAILAND	15.0000	.0000	1
	PAKISTAN	12.5000	.0000	1
	CHILE	10.0000	.0000	1
	LUXEMBOURG	10.0000	.0000	1

Chapter 5

**Table 5.15:** Cross-tabulation of mean local sourcing by country and industry  
(See text for explanation of categorization).

NATION	COUNT	INDUST				ROW TOTAL
		1.00	2.00	3.00	4.00	
1.00	10	11	5	4	30 27.0	
2.00	11	5	7	5	28 25.2	
3.00	13	8	5	5	31 27.9	
4.00	4	6	6	6	22 19.8	
COLUMN TOTAL	38 34.2	30 27.0	23 20.7	20 18.0	111 100.0	

<u>CHI-SQUARE</u>	<u>D.F.</u>	<u>SIGNIFICANCE</u>	<u>MIN E.F.</u>	<u>CELLS WITH E.F. &lt; 5</u>
7.05858	9	0.6310	3.964	2 OF 16(12.5%)

NUMBER OF MISSING OBSERVATIONS = 0

### 5.34 Disconfirmatory findings

Statistical estimation of the model specified in Chapter 4 supported many of the hypotheses stated for expected relationships. But two unexpected relationships emerged, while three expected significant relationships proved not-significantly-different from zero in the unadjusted model; two more (for INTERN, discussed above) became non-significant when dependent variables OUTSRC and VALADD were stated as deviations from industry means.

#### Unexpected relationships

Central government revenues (REVGDP), expected to prove significant only in the equation for institutional/legal environmental stability (ILESTAB),

## Chapter 5

proved significant and negative in the OUTSRC equation and positively-signed, significant in the equation for self-enforcing contracts (SELCON). The negative relationship of REVGDP strengthened considerably in significance when OUTSRC was adjusted for industry means.

The negative relationship of REVGDP to OUTSRC seems particularly surprising for two reasons. First, high-ranking countries on REVGDP are, in general, industrialized, with high per capita income for the sample, and presumably considerable indigenous competence. (Table 5.16 presents the Pearson correlation matrix for the directly-observed variables and gross domestic product (GDP) per capita for the sample of 111 affiliates.) Competence, industrialization and wealth might be expected to reduce the relevance of vertical integration for transfer of skills, technology and capital relevant to MNCs' production processes, and to increase the availability and attractiveness of local suppliers. In any case, no direct relationship was hypothesized between these variables. Second, legislative party fractionalization (LEGFRAC), although highly correlated with REVGDP in both Pearson and Spearman rank coefficients (.46,  $p = .005$ ,  $n=36$ ), showed no similar pattern of association with OUTSRC and SELCON.

Chapter 4 argued that the convergence of LEGFRAC and REVGDP as measures of countries' political environments, and their mutual lack of correlation with PARDOM might associate with a distinction between two groups of countries in sources of industrial strategy implementation capabilities. The proposed distinction defined implementation approaches of state dominance (High PARDOM) and intersectoral collaboration (High LEGFRAC and REVGDP). Theoretically, managers might more readily rely upon the policies of collaborators, because these states possess the financial and organizational means and political inclusiveness to compensate interest groups damaged by the policies. Dominant

**Table 5.16:** Pearson correlation matrix of the directly-observed variables and gross domestic product per capita (GDPPC).

	VALADD	LEGFRAC	PARDOM	OUTSRC	GDPPC	REVGDP
VALADD	1.0000 ( .111) p= .	.1188 ( .111) p= .107	.0654 ( .111) p= .248	.0525 ( .111) p= .292	.0874 ( .111) p= .181	.0473 ( .111) p= .3483
LEGFRAC	.1188 ( .111) p= .107	1.0000 ( .111) p= .	-.1047 ( .111) p= .137	-.0437 ( .111) p= .325	.3520 ( .111) p= .000	.3483 ( .111) p= .000
PARDOM	.0654 ( .111) p= .248	-.1047 ( .111) p= .137	1.0000 ( .111) p= .	.1160 ( .111) p= .113	-.0172 ( .111) p= .429	-.1646 ( .111) p= .042
OUTSRC	.0525 ( .111) p= .292	-.0437 ( .111) p= .325	.1160 ( .111) p= .113	1.0000 ( .111) p= .	-.2424 ( .111) p= .005	-.2285 ( .111) p= .008
GDPPC	.0874 ( .111) p= .181	.3520 ( .111) p= .000	-.0172 ( .111) p= .429	-.2424 ( .111) p= .005	1.0000 ( .111) p= .	.1322 ( .111) p= .083
REVGDP	.0473 ( .111) p= .311	.3483 ( .111) p= .000	-.1646 ( .111) p= .042	-.2285 ( .111) p= .008	.1322 ( .111) p= .083	1.0000 ( .111) p= .

(COEFFICIENT / (CASES) / 1-TAILED SIG)

states lack financial means of compensation and political inclusiveness, and might be more likely to expand interventions or change policies in the face of domestic political changes. Consequently, managers might accord relatively more importance to assurances such as transaction-specific asset exposures to augment contractual self-enforcement in public-policy-contingent supplier relationships.

Central government revenues do not, however, correlate perfectly with legislative party fractionalization. Collaborative strategy implementation may not be possible in the absence of highly-inclusive legislatures. In more polarized or exclusive settings, states with the resources represented by high REVGDP may have the financial capabilities, but not the political network

## Chapter 5

necessary to compensate political interests which would otherwise pressure for industrial policy changes. Legislative fractionalization (LEGFRAC), therefore may provide the only statistical distinguishing factor in the model between collaborative and dominant capabilities.

The common association which PARDOM and REVGDP share with SELCON (although themselves uncorrelated) makes apparent that the model may fail to directly operationalize one or more underlying associations between these two variables. One obvious example might be the large-scale state-owned enterprises, which operate in many of the countries with high values on either of these variables. But the model and data can not distinguish operationally between the financial value nor differential impact of this type of public policy contingency as compared to the others investigated in the study. It is important to acknowledge, therefore that the political attributes and functional forms in the model do not directly operationalize nor provide sufficient grounds to predict with certainty how distinctions between industrial strategy implementation approaches make a difference to managers' perceptions of the importance of asset specificity.

Public policy contingencies seem often, but not always to associate with special enforcement provisions which reinforce commercial relationships between MNCs and local suppliers. Strategy implementation capability differences among states could explain part of the variation. But other factors, such as size of financial incentives offered, might also help to explain it. Central governments which enjoy substantial revenue flows may also enjoy capabilities to offer larger incentives than central governments which lack such resources. Large incentives may induce MNCs to make larger accommodations. Large incentives may, therefore associate more frequently than do small incentives with large investments or sourcing arrangements in

## Chapter 5

countries. Large investments or sourcing arrangements may often be too costly for MNCs to duplicate elsewhere in the world. If accepted and relied upon therefore, these incentives may also expose MNCs to greater damages if rescinded. Consequently, the augmentation of contractual self-enforcement in these relationships may reflect the magnitudes of these exposures, rather than the effects of governments' past unreliabilities. Asset specificity may also constitute an innate characteristic of large projects, or at least correlate highly with capital intensity. These factors may explain why REVGDP as well as PARDOM associates positively and significantly with SELCON.

The significant negative association between REVGDP and OUTSRC, however, suggests that the self-enforcing contracts offset not the factors discussed above, but also a large and direct disincentive to outsourcing. Government revenues and public borrowing together fund state operations (government consumption), transfers of income through national welfare systems, defense, and public investment. Economists have argued that during the 1980s, high tax rates among European Community members (who dominate the REVGDP high rankings) have raised labor costs, increased capital/labor ratios, reduced savings and investment rates, and deflected investment, including "seed money" for new businesses toward the United States and NICs (Wall Street Journal, July 15, 1987; July 27, 1987). This deflection may raise the cost of capital to entrepreneurs wishing to start businesses which might take up supply contracts with MNCs. High labor costs may have also rendered European sources relatively less attractive as compared to sources located elsewhere in the world. The positive association between REVGDP and SELCON may also follow from this argument, if site and dedicated asset specificity correlate highly with capital-intensive operations.

## Chapter 5

High revenues and government borrowing may also correspond to government investment. Such investments, while they may promote future economic growth, may inhibit private sector growth in the immediate term. As evidence, Sundararajan and Thakur (1980) demonstrated in a dynamic investment model, that public sector investment had in the short run "crowded out" private sector economic activity in India during periods between 1960 and 1975. Public investment in Korea had taken the opposite short run effect. In both countries over the long run, public investment enhanced private investment. But the period of time necessary to reverse the initial crowding-out-effect in India proved to be substantial.

Short-run crowding-out of entrepreneurs who would invest in assets to supply inputs to MNCs, may explain the negative REVGDP/OUTSRC relationship. The simultaneous positive relationship of REVGDP to SELCON may reflect nothing more than a complementary shift toward publicly-assisted and government-owned suppliers which, through these preferences capture the necessary resources to enter into relationships with MNCs.

### Non-significant Paths

Model estimation for both the adjusted and unadjusted data returned disconfirmatory tests of significance on three hypothesized relationships among the endogenous variables. SELCON and ILESTAB proved non-significant in the VALADD equation. VALADD fell just short of significance at the .10 probability level in the equation for OUTSRC.

None of these coefficients' signs had been predicted with much confidence in the discussion of Chapter 4. Given the curvilinear relationship which FDI theory suggests should exist between uncertainty in countries (high transaction costs) and FDI, the possibility that data would reveal no significant linear relationship between ILESTAB and VALADD should have been anticipated in the research proposal.

## Chapter 5

SELCON in the VALADD equation and VALADD in the OUTSRC equation had been hypothesized as necessarily of the same sign. Chapter 4 speculated this should be positive, as the government policies associated with the self-enforcing contracts modeled in SELCON aim partly to replace intrafirm imports. Replacement of intrafirm imports in favor of subsidized local inputs should lower affiliate costs and increase value-added. Although the relationship of VALADD to OUTSRC proved positive and near-significant for the unadjusted data, the relationship attenuated when VALADD and OUTSRC were standardized as deviations from industry means. Given that outsourcing estimates reflected government-policy induced input purchases, as well as unaffected purchases, and could complement as well as substitute for MNCs' internal capabilities, any relationship between VALADD and OUTSRC may be undetectable without a better specification of the VALADD equation and the use of time-series data.

Similar arguments apply to the relationship between SELCON and VALADD. Assuming self-enforcing contracts associate positively with outsourcing, their impact on value-added will depend on particulars of the sample. It may be positive, negative or zero. If the negative relationship in this sample had proven significant, several explanations could apply. The incentives associated with the self-enforcing contracts might 1) tend to associate with imports of complementary inputs from sister affiliates, or 2) tend to associate with outsourcing of affiliates' production activities holding intrafirm imports constant, or 3) represent circumstances where affiliates tolerate high costs due to a paucity of alternative suppliers, or to demonstrate good citizenship. Opposite effects, or heterogeneous effects canceling each other out might also be detected.



## Chapter 5

### 5.4 Conclusion.

This concludes the presentation of statistical results from the field research conducted to operationalize the model discussed in Chapter 4.

Chapter 6 will provide a summary of the findings reported at length here, and conclude the study with a discussion of the implications of these findings for academic theory and for public and corporate policy.

**CHAPTER SIX**

**Conclusion: Policy Implications;  
Further Research Directions**

**6.0 Introduction**

This study has presented an empirical investigation of the role of self-enforcement in a number of U.S.-based MNCs' public-policy-contingent subcontracting relationships in 36 host countries. The view from this narrow intersection of corporate and government strategy offers broader insights into the general phenomenon of host government/MNC strategic interaction. This chapter begins by summarizing the study's argument and findings. In doing so, it confronts the argument with support, limitations, contradictions and changes. The chapter continues by drawing implications from this discussion for strategy practitioners and researchers in business, government and academe. It concludes by raising a question concerning the nature and underlying dynamic of relationships among host national institutions and multinational corporations.

**6.1 Summary of objectives and findings.**

This study addressed arguments to three distinct areas of research interest: the domestic politics of international economic relations and industrial strategy; international business strategy as applied economics of foreign direct investment and industrial organization; and the intersection of these in the study of host government/MNC relations.

## Chapter 6

The study argued that two factors interact to condition the behavior of governments and international manufacturing firms when they implement interdependent strategies. These comprise:

- 1) the conditions under which international firms will accept incentives to modify their behavior to suit governments' economic objectives, and
- 2) the domestic political conditions which influence governments' strategy implementation capabilities.

In addressing the first set of conditions, the study provided quantitative evidence that:

- 1) MNCs' willingness to implement their strategies in accordance with host governments' aims depends on managements' perceptions of governments' past records of maintaining consistent policy regimes.
- 2) As managements' perceptions of government policy stability become more negative, they attribute increasing importance to hostage-taking in public-policy-contingent relationships with host country suppliers. More particularly, they regard government-subsidized suppliers' exposures of transaction-specific assets as increasingly-important relationship elements. Suppliers can not recoup their costs in these exposures if their relationships with MNCs end. Consequently, these exposures diminish propensities for suppliers to renege on their commitments to MNCs in cases where governments renege.

In addressing the second set of conditions, the study quantitatively explored the relationship between political and economic development, and approaches to economic strategy implementation.

- 1) Identifiable patterns of national institutional development signal to MNCs that governments have the political capacity not only to plan industrial strategies, but also to implement strategies consistent with their plans.
- 2) An operational distinction exists between two government strategy implementation approaches:
  - a) Public/private intersectoral collaboration, in which governments usually make and implement strategic choices within consensual networks of mutually-adjusting state and societal institutions, such as business and labor associations. These networks may sufficiently encompass political interest groups to approximate the interests of nations as cohesive entities.
  - b) State dominance, in which governments substitute for or internalize weak societal institutions. Dominant states more often make and implement strategic choices through direct intervention and participation in economic activity.

## Chapter 6

The study argued that state organizational capabilities associated with collaboration were more consistent with reliable policy regimes than those associated with state dominance, for three reasons:

- 1) Prior consensus among political interests.
- 2) More elaborate policy instrumentation, for cases where multiple targeting becomes necessary or desirable to satisfy multiple constituencies or dynamic conditions.
- 3) Relatively greater financial resources available to governments which tended to fit collaboration's empirical attribute profile. This aspect follows from the advanced status of state institutional development in these countries, which implies capabilities in internal revenue generation and public finance (See Ardant, 1975).

These strengths of public/private sectoral collaboration correspond to deficiencies in state-dominant approaches to industrial strategy implementation. Consequently, the study's argument reflected an expectation that:

- MNCs' attributions of importance to transaction-specific assets in public-policy-contingent relationships increase as countries' strategy implementation approaches display increasing attributes of state dominance.

This expectation assumed as given, statistical support for the expected association between asset specificity and perceptions of less reliable public policy regimes. Data revealed the expected relationships. But one of the hypothesized attributes of collaboration, high government revenues, associated with asset specificity, too. The results of statistical tests, therefore, may be interpreted as consistent with, but not directly supportive of the distinctions drawn between these government strategy implementation approaches.

The operationalization and results seem sufficient only to support a less elaborate set of notions. These consolidate to three propositions:

## Chapter 6

- 1) Governments introduce uncertainty into prospective commercial relationships, when they intervene to alter the price system's judgment of the relationships' economic viabilities.
- 2) In many circumstances where MNCs cooperate with governments despite this uncertainty, such factors as asset specificity provide uncertainty-offsetting self-enforcement in the resulting public-policy-contingent relationships.
- 3) More speculatively, if augmenting self-enforcement in these relationships persuades MNCs to take actions which they would not otherwise have taken, these may provide evidence of states' impacts on MNCs' international strategies.

### 6.2 Reconciling government and corporate strategies.

Host countries seeking to implement industrial strategies which require MNCs' cooperation face a conundrum. Their governments seek as outsiders to influence managers' resource allocation decisions within MNCs' international networks. Yet the networks exist to appropriate for insiders the efficiency gains from retaining these strategic choices as internal governance processes. Host states have implemented policies designed to minimize MNCs' control over domestic economic activities, while maximizing their countries' shares of the gains from network participation. "New forms" of mixed-mode foreign market entry seek to unbundle the packages of capital, technology and management technique which underlie MNCs' competitive advantages. In these approaches host countries license technology, contract for management services, purchase "off-the-shelf" turnkey plants or engage MNCs in various forms of joint venturing and collaboration including outsourcing, which limit their ownership interests (Oman, 1984a; 1984b; 1986; Porter and Fuller, 1986; Ghemawat, Porter and Rawlinson, 1986).

Criticism of these approaches has argued that they must fail to maximize host countries' opportunities, because they naively rely upon MNCs to form external linkages which transactional inefficiencies preclude (Hennart, 1987).

## Chapter 6

Efficient configuration and linkage of a given national activity in an MNC's international coordination network, regardless of ownership creates economies of scale and economies of scope which local factors might not otherwise achieve. In support of his argument, Hennart presented evidence that some host countries which have engaged MNCs in new forms of involvement have unwittingly licensed inappropriate technology, overpaid, or bought obsolete plants. In this view, host country policy-makers should never prefer strategies which mandate mixed modes of market entry, to policies which permit MNCs full scope to respond to market infirmities with internalization strategies.

MNCs' managers confront a broader set of alternative governance modes for activities critical to their production processes, however, than the dichotomy of market dealing and internalization suggests. Markets and hierarchies define poles of a continuum along which governance arrangements vary in the degree to which common institutional sponsorship dictates factors which determine buyers' and sellers' incentives. Spot dealings under neoclassical perfect competition represent one extreme of exchange among unrelated parties, where none can affect price. Internalization represents the other extreme: exchange among members of the same organization under managerially-chosen behavioral constraints (Hennart, 1986). Between these extremes lie interorganizational agreement and shared ownership instruments, including long-term contracts, augmented contractual self-enforcement, and joint ventures.

Uncertainty may preclude MNCs from efficiently adapting to government-policy-induced interorganizational relations, despite the range of governance instruments available. But the main results of the investigation of managerial practice and perceptions presented in this study seem consistent

with the idea that uncertainty need not have this effect. The evidence presented here suggests that a broader, non-statutory policy orientation might avoid or reduce efficiency losses, yet nevertheless produce governments' desired effects on property rights in host countries' international economic sectors. This broader orientation targets not only the allocation of activities between domestic- and foreign-owned firms, but also the governance modes which order incentives in any consequent relationships. Implementation would rely on competent host government administrators and private consultants operating under flexible mandates.

### **6.3 MNCs and national institutions.**

Perceptions of current international management practice must be placed in context, before they can offer much guidance to future theoretical development or problem-solving. This study has attempted to quantify a framework normally applied in cross-national, comparative institutional analysis, to assess domestic political environmental context as a factor in MNC/host country bargaining interaction. Comparative institutional analysis inquires into the impacts on national political processes of state and societal structural organizational characteristics. It is normally undertaken as an in-depth analysis of a limited number of cases. Statistical operationalization may provide an inappropriate test of comparative institutional approaches, or in itself render them non-comparative (See Chapter 1, pp. 15-16). In weighing this section's remarks therefore, it may prove appropriate to recall the more qualitative material in the study, especially Chapter 3.

As a managerial tool, comparative institutional analysis directs attention to the empirical referents of relatively stable features of national political environments. Analysis of such factors in MNCs' strategic planning processes

## Chapter 6

could avoid unwarranted confidence in relationships guaranteed by contracts of questionable enforceability. On the other hand, Kobrin's survey evidence (1982) suggested that during the late 1970s, managers' perceptions may often have overstated political instability. Overstated perceptions of public-policy instability may lead MNCs to avoid mutually-beneficial relationships with state-assisted suppliers or to unnecessarily discount government financial assistance. Overstatement could also lead MNCs to enter public-policy-contingent relationships under inappropriate governance schemes, thereby compromising international strategic flexibility.

For example, an MNC's managers might balance off a prospective supplier's commitment to invest in transaction-specific assets, against concerns that the supplier will lose its government subsidy and wish to curtail deliveries. But the supplier's commitment may carry reasonable, reciprocal obligations such as a take-or-pay provision. Furthermore, all parties might be better off using a general purpose technology, instead of a technique necessitating transaction-specific assets. If deployment of specialized assets cannot be avoided, many circumstances also exist in which MNCs might be better off owning the assets and leasing them to suppliers.

Managers learn from experience that contracts carry little meaning if the underlying incentives of the transacting parties diverge. MNCs may avoid flexibility losses from specialized contracting in public-policy-contingent supplier relationships, if norms of reciprocity encourage incremental, mutual adjustment to changing circumstances. In such relationships both parties make short term concessions or refrain from seizing momentary advantages in the interests of continuing, mutually-beneficial exchange. Such relationships display the inverse characteristics of those which provided the focus of this study. The study has mainly explored means by which domestic parties to



## Chapter 6

transactions signal their long-term intentions by rendering their behaviors non-adaptable to political environmental change.

Strategies which reduce national economic flexibility in exchange for local suppliers' market access to MNCs may do so at the expense of other important international competitive values. Countries, like companies face the challenges of an accelerating pace of innovation and the product life cycle (Vernon, 1981) and may benefit from diversification of their economies. Unlike companies, governments must always take responsibility for maintaining stable growth and full employment. In a rapidly restructuring world economy, industrial flexibility and diversity may better serve these ends. Rather than locking up resources in assets specialized to global mass marketing missions, governments may wish to promote development of general purpose technologies, flexible manufacturing systems (FMS) and versatile human resources (Piore and Sabel, 1984).

If flexible and general purpose production technologies represent the future, however, governments might do well to encourage their domestic deployment without prejudice as to ownership. In theory if not in practice, the long-term value in acquiring such advanced capabilities may dominate the immediate returns from the more expedient response to political demands for national ownership. But this returns the discussion to its starting place in considering the stabilizing impacts of developed institutions on domestic political economic environments. Institutional development, by definition does not constitute a policy-actionable target.

National political and societal institutions have been described both as embodiments and organizational instruments of societal values (Benjamin and Duvall, 1985; Scott, 1988). As such, these constitute relatively lasting features of host countries' environments. Institutional environments clearly

## Chapter 6

evolve as countries develop politically and economically. But their nature implies that neither host countries' choices nor those of multinational corporations can change them very quickly.

Although institutions may not be policy-actionable within any practical time horizon, managers' perceptions of political environments may present viable policy targets. Studies have suggested that managers often display predispositions of skepticism concerning government policies' impacts on their businesses (Vogel, 1978) and have at times overestimated instability in national political environments (Kobrin, 1982). If so, the provision of information to business and the general public concerning governments' capabilities and strategies may constitute an important instrument of implementation. Information provision tactics may include manipulation of international media to appropriately package the national business environment, as well as consular and other outreach programs. Processes of strategic planning and implementation might also be redesigned to involve foreign businesses in consultative roles. This step amounts to altering government behavior and processes to more closely resemble collaborative approaches to strategy implementation. To the extent that such programs reduce uncertainty, they may refine MNCs' abilities to fit within the constraints and maximize the opportunities created within the MNCs' relationships with national institutions. These refinements may expand the scope of strategic choice and increase flexibility for both firms and states.

### **6.4 A Question.**

This study investigates a cross-section of data from a limited number of countries and companies. It can not offer conclusions about the dynamic of change underlying their circumstances, nor predict the future. Even highly-

## Chapter 6

qualified speculation seems reckless, given the chance of being taken out of context. Yet it does not seem irresponsible to acknowledge two alternative scenarios of host country/MNC relations which reflect accepted avenues of inquiry on organizations. This section does not suggest a choice between these scenarios, nor veil a hidden preference. It restricts its objective to the evocation of further inquiry.

Host governments' strategies to mandate complementarity among domestic suppliers and MNCs may represent a stage in a process whereby all organizations in the world become more similar, interlinked and by implication, interchangeable. Alternatively, these strategies may represent a stage in a process whereby organizations become more interlinked, but also more specialized, less similar and their rewards more unequal across countries. The first scenario reflects the institutional isomorphism hypothesis most visibly advanced by DiMaggio and Powell (1983). The second reflects the literature on dependency (See Evans, 1979).

In the present study, both institutional differences and similarities emerged among and within the groups of countries taking high values on the measures analyzed in Chapter 3. Institutional differences are to be expected in a cross-national sample of countries. These differences, however, appeared to be systematic and consistent with a distinction between state dominance and public/private collaboration as institutional foundations of countries' industrial strategy implementation capabilities.

In the statistical analysis of Chapter 5, empirical correlates of public/private sectoral collaboration associated with managerial perceptions that governments perform well in keeping their commitments. Collaborative industrial strategy implementation capabilities arise in networks of national institutions which integrate government decision-making and social interest

## Chapter 6

(including business) representation (See Katzenstein, 1984). These approaches engage government officials, interest groups, affected domestic economic agents and possibly their foreign-owned clients (which may well be staffed at the highest levels by host nationals) in ongoing bargaining which places a high value on intertemporal reciprocity and short-term flexibility. These networks and high values on their empirical attributes tend most consistently to characterize the industrialized democracies.

Supplier asset specificity in public-policy-contingent supplier relationships on the other hand, associated most strongly with an empirical measure which the study argued reflected state-dominant approaches to industrial strategy implementation. This measure -- single party dominance of the state executive branch -- most consistently takes high values for industrializing countries with authoritarian or single party states. The empirical measure most tied in theory to collaborative, interest-group-integrative domestic politics -- legislative party fractionalization (See Lijphart, 1984) -- did not associate significantly with asset specificity.

This dissimilarity between internally similar groups of industrialized and industrializing countries may imply that institutions in each have developed to different stages in a process leading toward an equilibrium state of sameness. Many of the arguments which have been presented in the study implicitly reflect such an assumption.

The data, however, may also reflect an inverse dynamic. The salience of supplier asset specificity in developing countries' relationships with MNCs, as compared to those of developed countries may also reflect a relative deficiency and continuing deterioration of bargaining power. In developed countries, government-sponsored international selling opportunities may accrue to local beneficiaries through social consensus and intersectoral bargaining.

## Chapter 6

But in developing countries, these same opportunities may continue to accrue through elite privilege and governmental directiveness. In the future, well-off countries may increasingly enjoy flexible, interchangeable, evolutionary linkages with MNCs' international networks, while developing countries remain locked into rigid, specialized relationships characterized by narrow-gauge technologies of the past.

Quantitative studies using cross-sectional data do not provide grounds to either favor or disfavor these alternative scenarios. Research to develop the ideas discussed in this dissertation may cast light on the alternatives, or on intermediate and mixed possibilities. This research could take two distinct paths, departing from the staging area provided in this study. Travel along one path would employ game-theoretic models to simulate the three-party, indirect strategic interaction surrounding MNCs' public-policy-contingent commercial relationships in host countries. This research might help to illuminate and generalize technical issues surrounding relative bargaining power and the mutual implications of technological flexibilities and rigidities for MNCs and host countries. The second path leads into comparative historical analysis of the relationships among host country institutions, local business and MNCs. This research would expose a limited number of the countries and companies included in this study to in-depth, qualitative case analysis. This research might help draw together diverse academic literatures on institutions and industrial policies of developed and developing countries, to evaluate whether their evolutionary paths converge, diverge, or follow some other more complex, chaotic pattern.

**APPENDIX ONE**

**Survey procedure; formation of the respondent group; questionnaire.**

This appendix provides additional details of the survey procedure discussed in Chapter 5. It also presents the questionnaire.

Thirty-four affiliates of the first head offices to authorize the survey participated during November/December, 1986 in a pre-test of the questionnaire, materials and process. Slight revisions and additions to the questionnaire resulted. Pre-test participants were added back into the sample by copying their original responses into the revised questionnaire, except for revised items; and returning this plus their original questionnaires to them, with a request to fill out the revised and added items provided.

Ninety-seven fresh contacts received the revised questionnaire in a January 31, 1987 mailing. Subsequently, questionnaires were mailed continuously upon receipt of participants' authorizations and lists. Each survey packet contained a principal investigator's letter on University stationery, plus two copies of the survey instrument. The letter requested that the managing director complete and return a questionnaire, and hand the second copy to a knowledgeable associate to complete independently. Participants received a maximum of two followups after initial approach. The first followup took the form of an aerogram confirmation and letter of thanks sent within two weeks of the initial mailing. The second followup went only to affiliates for which no response had been received within two months of initial approach. Partially-completed questionnaires were returned to the participants with a request for additional information.

All surveys were mailed from the researcher's office through the official government mail services, with one exception. The exceptional company provided the use of its private courier service to its affiliates in particularly remote locations.

## Appendix

One questionnaire per company was selected for inclusion in the data analysis for this study, according to criteria of respondent title. Responses received priority if the executives making them bore the following titles, or titles like them which shared key descriptors: purchasing manager; manufacturing materials manager; supply manager; works manager; manufacturing director; operations director; business planning, development or strategy staff. If affiliates lacked responses from such executives, the top manager's response was incorporated into the sample. Ambiguous or missing responses to entire questions required additional deletions from the data set. Missing item responses were plugged with mean-substitution. The final number of responses incorporated into all analyses proved to be 111.

The next eight pages contain a facsimile of the questionnaire used in the survey.

HOST GOVERNMENTS' POLICIES, AND  
MULTINATIONALS' MAKE-OR-BUY DECISIONS

CONFIDENTIAL

CONFIDENTIAL



The University of Michigan  
School of Business Administration  
Ann Arbor, MI 48109-1234



New York University  
Graduate School of Business Administration  
100 Trinity Place  
New York, N.Y. 10006

Your parent company has suggested that we invite you to participate in a study of how governments influence make-or-buy decisions. Currently, many governments have industrial policies which may increase their domestic industries' attractiveness as suppliers and customers in local and world markets. We hope to learn whether managers of multinational firms' affiliates think certain of these government policy approaches produce more stable business conditions.

This questionnaire is designed to measure executives' perceptions, rather than to record the results of detailed analyses. While we ask that you reflect upon the questions, and answer factual questions as accurately as possible, we urge you to answer from your own knowledge of your business. Executives who have already responded generally agree that respondents need set aside no more than 30 - 35 minutes to complete the survey.

We welcome additional comments in space provided on the back, or on additional sheets, if you choose. All of your answers will be held in strictest confidence, and used only in aggregate statistical analyses.

We appreciate your investment of time, and look forward to your response. We will report our findings to you, at the study's conclusion.



**HOST GOVERNMENTS' POLICIES, AND**  
**MULTINATIONALS' MAKE-OR-BUY DECISIONS**

**CONFIDENTIAL****CONFIDENTIAL**

A. **INTERNAL SOURCING**: This section asks about products which your subsidiary makes, or imports from other units of your company.

1.00 Our subsidiary's primary  
 (i.e. best-selling) product line is: \_\_\_\_\_  
 (product category)

2.00 The primary product line mentioned in question 1.00 is sold: (check as many items as apply):

- 2.01 \_\_\_ In domestic consumer markets.  
 2.02 \_\_\_ In domestic industrial markets.  
 2.03 \_\_\_ as exports to other units of our parent company.  
 2.04 \_\_\_ as exports to arms-length trading partners.  
 2.05 \_\_\_ as finished products.  
 2.06 \_\_\_ as intermediate products.  
 2.07 \_\_\_ as an ancillary service.

3.00 Please check in column (a) any primary-product-line-related activities or capabilities, which your subsidiary owns or performs in company facilities. Please check in column (b) capabilities or activities which your subsidiary obtains from other company units in other countries. (Please use brackets to combine items, if this describes your business better than our breakdown. Check only what applies. We ask you LATER for information about activities supplied from outside.)

	<u>Own or Perform in-house</u> (a)	<u>Obtain or Import intrafirm</u> (b)	<u>(Next Question) Ranks</u> (c)
3.01 purchasing administration.	___	___	___
3.02 research and development.	___	___	___
3.03 physical premises.	___	___	___
3.04 design of manufacturing equipment.	___	___	___
3.05 ownership of manufacturing equipment.	___	___	___
3.06 raw materials extraction.	___	___	___
3.07 raw materials processing.	___	___	___
3.08 component fabrication.	___	___	___
3.09 sub-assembly.	___	___	___
3.10 final assembly.	___	___	___
3.11 packaging materials manufacturing.	___	___	___
3.12 package assembly for shipment and sale.	___	___	___
3.13 advertising/creative/marketing services.	___	___	___
3.14 sales representation/distribution.	___	___	___
3.15 warehousing/shipping administration.	___	___	___
3.16 transportation.	___	___	___
3.17 service.	___	___	___
3.18 retailing.	___	___	___
3.19 consumption (leasing, use as input, etc.)	___	___	___

4.00 Please rank in order only the four most costly activities checked in column (a) of Question 3.00, based on their estimated shares of subsidiary total costs in the past year (1=largest share). Then please do the same for column (b).

Appendix

5.00 Please refer to your TOP-RANKED IN-HOUSE ACTIVITY in question 4.00. If you searched for outside bidders to perform the least complex part of this activity in your country, can you think of any suppliers who would offer existing capacity, new capacity, or to enter the field and/or country?

5.01  YES; (IF YES, please answer Questions 5.1 - 5.2).

5.02  NO potential bidders in or out of the country would step forward. (IF NO, PLEASE SKIP TO QUESTION 6.00, on page 4)

5.10 Consider the most competent firm among the bidders you thought about in response 5.01. The items below describe factors which often favor or disfavor outside suppliers. In your opinion, how would this firm compare to your operation, on the following factors? (Circle one number for each item.)

	<u>Strongly favor own operation.</u>	<u>Moderately favor own operation.</u>	<u>No dif-ference.</u>	<u>Moderately favor outsider.</u>	<u>Strongly favor outsider.</u>
5.11 Chances of late or short deliveries.	5	4	3	2	1
5.12 Economies of scale.	5	4	3	2	1
5.13 Labor costs.	5	4	3	2	1
5.14 Distance activity's product must be shipped.	5	4	3	2	1
5.15 Quality assurance.	5	4	3	2	1
5.16 Inventory costs.	5	4	3	2	1
5.17 Time spent negotiating cost allocations.	5	4	3	2	1
5.18 Time spent negotiating specifications.	5	4	3	2	1

5.20 If you actually shifted the activity in question 5.00 to the most competent firm of question 5.10, would this decision risk the corporation's competitive position, in the following areas?

	<u>No risk</u>	<u>Acceptable risk.</u>	<u>Possibly acceptable risk.</u>	<u>Probably unacceptable risk.</u>	<u>Definitely unacceptable risk</u>
5.21 Control over proprietary technology.	1	2	3	4	5
5.22 Final product price.	1	2	3	4	5
5.23 Shipping delays.	1	2	3	4	5
5.24 Product quality.	1	2	3	4	5
5.25 Supplier becomes your market competitor.	1	2	3	4	5

Appendix

6.00 Please refer to your TOP-RANKED INTRA-FIRM IMPORT in question 4.00. If you searched for outside suppliers to perform the least complex part of this activity in your country, can you think of any firms which would offer existing capacity, new capacity, or to enter the field and/or country?

- 6.01  YES. (IF YES, please answer Questions 6.1-6.2)  
 6.02  NO potential bidders in or out of the country would step forward.  
 (IF NO, PLEASE SKIP TO QUESTION 7.00, on page 5)

6.10 Consider the most competent firm among the bidders you thought about in response 6.01. The items below describe factors which often favor or disfavor outside suppliers. In your opinion, how would this firm compare to your operation, on the following factors? (Circle one number for each item.)

	<u>Strongly favor own operation.</u>	<u>Moderately favor own operation.</u>	<u>No dif-ference.</u>	<u>Moderately favor outsider.</u>	<u>Strongly favor outsider.</u>
6.11 Chances of late or short deliveries.	5	4	3	2	1
6.12 Economies of scale.	5	4	3	2	1
6.13 Labor costs.	5	4	3	2	1
6.14 Distance activity's product must be shipped.	5	4	3	2	1
6.15 Quality assurance.	5	4	3	2	1
6.16 Inventory costs.	5	4	3	2	1
6.17 Time spent negotiating cost allocations.	5	4	3	2	1
6.18 Time spent negotiating specifications.	5	4	3	2	1

6.20 If you actually shifted the activity in question 6.00 to the most competent firm of question 6.10, would this decision risk the corporation's competitive position, in the following areas?

	<u>No risk</u>	<u>Acceptable risk.</u>	<u>Possibly acceptable risk.</u>	<u>Probably unacceptable risk.</u>	<u>Definitely unacceptable risk</u>
6.21 Control over proprietary technology.	1	2	3	4	5
6.22 Final product price.	1	2	3	4	5
6.23 Shipping delays.	1	2	3	4	5
6.24 Product quality.	1	2	3	4	5
6.25 Supplier becomes your market competitor.	1	2	3	4	5

Appendix

**B. EXTERNAL SOURCING:** This section asks about activities provided to your subsidiary by other local companies not owned by your parent corporation.

7.00 Please check any primary-product-related activities or capabilities below, which other local organizations perform entirely, or in part, for your subsidiary. (Check only items which apply)

	Sourced entirely <u>outside</u>	Sourced partly <u>outside</u>	(Next Question) <u>Rank</u>
7.01 purchasing administration.	---	---	---
7.02 research and development.	---	---	---
7.03 physical premises leasing.	---	---	---
7.04 design of manufacturing equipment.	---	---	---
7.05 ownership of manufacturing equipment.	---	---	---
7.06 raw materials extraction.	---	---	---
7.07 raw materials processing.	---	---	---
7.08 component fabrication.	---	---	---
7.09 sub-assembly.	---	---	---
7.10 final assembly.	---	---	---
7.11 packaging materials manufacturing.	---	---	---
7.12 package assembly for shipment and sale.	---	---	---
7.13 advertising/creative/marketing services.	---	---	---
7.14 sales representation/distribution.	---	---	---
7.15 warehousing/shipping administration.	---	---	---
7.16 transportation.	---	---	---
7.17 service.	---	---	---
7.18 retailing.	---	---	---
7.19 using or further processing the product.	---	---	---

IF YOU HAVE CHECKED ANY ACTIVITIES from 7.01 - 7.19 above, please ANSWER items 8.00 - 8.19.

If you have NOT checked any activities, SKIP to Question 10.00, on page 7.

8.00 Please rank in order the four most costly activities checked in Question 7.00, based on their shares of subsidiary total costs in the past year (1=largest).

8.10 Among the suppliers and customers performing the activities checked in Question 7.00, are any of them:

	<u>YES</u>	<u>NO</u>
8.11 Partially- or completely-government-owned.	---	---
8.12 Previously government-owned, or partially-owned.	---	---
8.13 Suppliers to government-owned enterprises.	---	---
8.14 Customers of government-owned enterprises.	---	---
8.15 Recipients of government subsidies.	---	---
8.16 Recipients of government sales contracts.	---	---
8.17 Government-owned bank or direct government loan recipients.	---	---
8.18 Government-guaranteed loan recipients.	---	---
8.19 Government agencies, <u>per 3e</u> .	---	---

IF you have checked "YES" for any items from 8.11 - 8.19, please ANSWER the items under Question 9.00.

Otherwise, SKIP to Section C, Question 10.00, on page 7.

Appendix

9.00 Please consider the suppliers and customers for which you answered "yes" in Items 8.11 - 8.17. Do any of the factors below affect the relationships between your subsidiary and their organizations?

	<u>Not a factor</u>	<u>Not important</u>	<u>Often important</u>	<u>Sometimes critical</u>	<u>Often Critical</u>
9.01 Licensing arrangements.	1	2	3	4	5
9.02 Adjacent facilities.	1	2	3	4	5
9.03 Orders comprising the entire annual output of certain facilities.	1	2	3	4	5
9.04 Their use of your designs.	1	2	3	4	5
9.05 Their investments in assets which only make goods for you or use your products.	1	2	3	4	5
9.06 Their service personnel's long experience working with you.	1	2	3	4	5
9.07 Their manufacturing personnel's experience using your products.	1	2	3	4	5
9.08 Their manufacturing personnel's experience making products for you.	1	2	3	4	5
9.09 Government credit or performance guarantees.	1	2	3	4	5
9.10 Other government incentives to making or using the goods traded.	1	2	3	4	5
9.11 Government requirements, such as local content rules.	1	2	3	4	5
9.12 Gov't job-training programs or credits aimed at processes which make or use the goods traded.	1	2	3	4	5
9.13 Less-specialized gov't job training programs or credits.	1	2	3	4	5

Appendix

C. BUSINESS ENVIRONMENT. This section asks how the domestic environment affects agreements between your subsidiary and local firms.

10.00 Please give your impression of how often the following events have occurred, in the past five years of your subsidiary's operations in the country. (Circle one number for each item.)

	Never <u>occurred</u>	Rarely <u>occurred</u>	Some- times <u>occurred</u>	Fre- quently <u>occurred</u>	Very Fre- quently <u>occurred</u>
10.01 Customer-initiated litigation.	1	2	3	4	5
10.02 Supplier-initiated litigation.	1	2	3	4	5
10.03 Unexpected tariff, local content, export quota or other trade regulation changes.	1	2	3	4	5
10.04 Loss of business advantage due to gov't. approval delays.	1	2	3	4	5
10.05 Sales loss because customer's government contract ends.	1	2	3	4	5
10.06 Supplier unreliability due to government contract problems.	1	2	3	4	5
10.07 Direct government contract loss without advance notice.	1	2	3	4	5
10.08 Shifts between internal and external sourcing due to exchange rate changes.	1	2	3	4	5

D. MAKE OR BUY: The following two estimates will help us assess outside suppliers' strategic importance to your company's competitive strength.

11.00 Subsidiary value-added:  
(estimated) \_\_\_\_\_%

SUBSIDIARY VALUE-ADDED IS CALCULATED AS: sales minus cost of materials, divided by sales. (Cost of materials includes costs of goods purchased from other local or international units of your parent company).

12.00 Local Sourcing:  
(estimated) \_\_\_\_\_%

LOCAL SOURCING IS CALCULATED AS: cost of all materials and services, excluding payroll, purchased in the country, divided by total subsidiary costs.

14.00 Country \_\_\_\_\_ 14.11 Industry \_\_\_\_\_

14.12 Functional Responsibilities \_\_\_\_\_

Appendix

15.00 Please use this space, if you wish to expand on any answers to the questions in the inside pages of the booklet. Any comments you have on the questionnaire, the idea behind this survey, or questions you wish to ask of us, will also be welcome. Attach additional pages, if you like.

Thank you for your help. We look forward to your comments on the results and usefulness of the study. Any questions which you may have in the mean time may be addressed to the researcher at the address below.

Please return this form directly to:

Thomas P. Murtha  
Department of International Business  
The University of Michigan  
School of Business Administration  
Ann Arbor, MI 48109-1234  
U.S.A.

Telephone: (313) 764-6360

Telex: 910-997-3064

## APPENDIX TWO

### **Construct validity and reliability in structural equation modeling with latent variables.**

This appendix repeats some of the information contained in Chapter 5, Section 5.22, with the addition of some technical details.

The social sciences lack common definitions of most constructs representing concepts intrinsic to their disciplines. Personality traits in psychology and transaction costs in economics exemplify such constructs. Even where scholars agree on the semantic content of a definition, the words' meanings remain difficult to establish on an intersubjective basis. Operational definitions of measures also remain elusive, in the absence of agreement on semantic definitions. The absence of common definitions corresponding to proven measures necessitates a formal method to assess whether measures of variation on a construct actually represent it, or something else.

Various authors have put forward criteria for the assessment of construct validity. Investigators may wish to check the degrees of convergence between observations on different measures which purport to measure the same construct. Investigators may check the degrees to which measures discriminate between purportedly dissimilar constructs. Campbell and Fiske (1959) referred to these assessments as measuring convergent and discriminant validity. Investigators may assess criterion-related validity on concurrent or predictive bases (Bohrnstedt, 1970). Concurrent validation examines the correlation between a measure and a concurrent direct measurement of the same construct. For example, concurrent validation of a scale which measures interest in music might involve correlating it with purchases of recordings.



## Appendix

Predictive validation examines the correlation between measures' predictions and actual outcomes.

Another method of construct validation proceeds on the basis of deductive theory. The researcher derives theoretical propositions, develops scales of items which on their face correspond to variables based on the theory's concepts, and tests hypotheses about the relationships among these. If the hypotheses hold, the researcher may claim predictive validation of the constructs. But if the hypotheses should fail of support, either a lack of construct validity or an incorrect theory might prove culpable.

### Reliability

Yet researchers may attenuate this ambiguity by proceeding in stages. The first stage establishes the validity of the constructs through checking for internal consistency of operationalizations. This involves a reliability test of the latent variables in model substructures, and trimming or adding theoretically-suggested items as required to achieve a satisfactory level. Having concluded this process, the researcher may proceed with tests of hypotheses of relationships among the variables (Bagozzi and Phillips, 1982; Bagozzi, 1984).

Tests of internal consistency address construct validity and reliability of measures in an interrelated manner. Measures require a high degree of unidimensionality among their constituent items, in order to achieve acceptable reliability according to this criterion. Measures which fail this test are multidimensional and cannot be considered variables (Bagozzi, 1980). The relationship of this concept of reliability to validity follows from classical test theory.

Classical test theory defines the reliability of a scale or test as the squared correlation ( $\rho_{XT}^2$ ) between an observed and true score (Ghiselli,

## Appendix

Campbell and Zedeck, 1981). Reliability may be expressed as the ratio of true-score variation to observed-score variation, and as the correlation between parallel tests:

(23 from Bohrnstedt)  $\rho_{XT}^2 = \rho_{XX}$

Ghiselli, et. al. (1981) define parallel tests as two or more tests designed to assess the same trait, or sets of operations that proceed from the same definition of a trait. The three procedures used for estimating reliability comprise the test-retest method, which administers the same test to the same subjects at different times; the split-half method, which divides test items measuring the same variable into two groups; and the internal consistency method. Internal consistency examines the intercorrelations of all items on a measure. This amounts to splitting a test  $n$  times. As Bohrnstedt (1970; citing Lord and Novick, 1968) points out, however, the  $n$  correlations among all of the items must result from (unknown) correlations between the items and an underlying construct: hopefully the construct which the investigator hopes to measure. If so, these correlations would indicate items' validities.

Validity can be defined as the correlation between observed and true scores. The correlation of a scale with some criterion can never exceed its correlation with its true score, known as its validity coefficient. As evidenced by the preceding equation, the validity coefficient equals the square root of reliability. The square root of reliability therefore presents an upper bound on the correlation of any measure with a criterion variable. Reliable measures fulfill a necessary condition to construct validity: predictive validation cannot be achieved in the absence of reliable measures.

## Appendix

The process of reliability testing used in the project reported here relied on Bagozzi's (1980) discussion of reliability in structural equation modeling. This approach generalizes from the classical concept of a true score. Classical measurement theory represents an observation  $x_{ij}$  of person  $i$  on variable  $j$  as a linear function of a true-score  $T_{ij}$  and an error-score random variable  $e_{ij}$ :

$$x_{ij} = T_{ij} + e_{ij}$$

The assumptions governing the model require all variables to have zero expectations, that the true score be uncorrelated with the error variables, and the variance-covariance matrix of errors be zero. Under these assumptions,

$$E(x_{ij}) = E(T_{ij}).$$

That is to say, the mean of observations serves as an unbiased estimate of the mean of true scores. It follows that:

Appendix

(See Bagozzi, 177) 
$$\sigma_{x_{ij}}^2 = \sigma_{T_{ij}}^2 + \sigma_{\epsilon_{ij}}^2$$

and the reliability of a particular measurement  $x_{ij}$  at a given point in time can be defined as (Ghiselli, et. al., 1981: 205):

$$\rho_{xT}^2 = \frac{\sigma_T^2}{\sigma_x^2} = \frac{\sigma_T^2}{\sigma_T^2 + \sigma_\epsilon^2} = 1 - \frac{\sigma_\epsilon^2}{\sigma_x^2}$$

The reliability coefficient therefore measures the ratio of true-score variation to observed-score variation.

Reliability testing of a structural equation latent variable model segregates the X and Y variables into two submodels. This amounts to setting each up as a confirmatory factor analysis with the hypothesis,

$H_0$  Variation in empirical observations on the items  $x_{ij}$  and  $y_{ij}$  is entirely accounted for by true score variation and random error.

The alternative would hypothesize that some other factor, such as a methods or key informant bias accounted for some portion of the variance. This would violate the assumption of uncorrelated errors. Running this model of reliability using LISREL produces estimates of the regression coefficients of the items on the factors; the variance-covariance matrix of the latent variables; and the error variance matrix. These estimates provide sufficient information to permit calculations of reliability for each constituent item

Appendix

and each latent variable according to the formulas,

$$\rho_{ij} = \frac{\lambda_{ij}^2 \text{Var}(T_j)}{\lambda_{ij}^2 \text{Var}(T_j) + \theta_{1j}}$$

for each item and for the latent variables, the composite:

$$\rho_i = \frac{(\sum \lambda_{ij})^2 \text{Var}(T_j)}{(\sum \lambda_{ij})^2 \text{Var}(T_j) + \sum \theta_{1j}}$$

where the  $\lambda_{ij}$  represent the regression weights, the  $T_j$ s represent the true scores, and their variances the variances of the  $x_{ij}$ , and the  $\theta_{ij}$  represent the error variances. Acceptable composite reliabilities should range above .6. No standards exist to judge the acceptability of individual items' reliabilities (Bagozzi and Yi, 1988).

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