AUTONOMY AND DEPENDENCE OF INTERNATIONAL COOPERATIVE VENTURES: AN EXPLORATION OF THE STRATEGIC PERFORMANCE OF U.S. VENTURES IN MEXICO

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Researchers have begun to view international cooperative ventures as complex, multiparty organizations in which foreign and local firms and the venture itself all have distinctive roles. This approach has important implications for the venture strategies of foreign firms in emerging economies. This study explores relationships between the resource contributions of parent firms and U.S. managers' assessment of venture performance in a sample of established U.S.–Mexican ventures. The research suggests that mature cooperative ventures are expected to achieve autonomy from parent firms in key areas at the same time that certain forms of strategic dependency also are important to success. Copyright © 2002 John Wiley & Sons, Ltd.

Research on international cooperative strategies has evolved rapidly since the Second World War. Early postwar studies focused on the multinational corporation, treating cooperative strategies as the outcome of investment restrictions and host country partners as generic representatives of local markets. Macroeconomic theories provided the basis for many of these studies, and research typically emphasized patterns of corporate expansion from home markets (Caves, 1971; Hymer, 1960; Kindleberger, 1969; Vernon, 1971).

A view of cooperative strategies as partnerships in which both foreign and host country firms play significant roles emerged in the 1980s. As studies of international ventures began to give the host country partner an independent identity, organizational and strategic theories also took on greater importance. Topics such as partial internalization, joint venturing, strategic motives for alliance formation, and partner selection became

central research concerns (Contractor and Lorange, 1988; Geringer, 1988).

In the last decade there has been growing recognition that cooperative strategies can be viewed as more than just partnerships between a host country organization and a foreign firm. A view has begun to emerge of international cooperative ventures as three-party organizations in which foreign and local firms—and the venture itself—all are seen as having distinctive, interdependent roles (Lorange, 1996). Although a good deal of empirical work has been done on cooperative strategies (Beamish and Killing, 1997a, 1997b, 1997c), this three-party perspective has not been used to examine strategies for emerging economies. Many fundamental questions about the ways that interrelationships among participants may influence the success of international cooperative strategies remain to be explored.

This study uses the concept that cooperative ventures can be treated as three-party arrangements to analyze cooperative strategies of U.S. firms in Mexico. The study examines the roles that managers in U.S. firms see for their own firms, their Mexican partners, and their cooperative ventures, and it analyzes the impact of those interrelationships on strategic performance. The

research indicates that U.S. managers find important ongoing roles for both their own firms and their local partners in cooperative ventures, but that certain types of independence for ventures also may be vital to success.

The study makes three basic contributions to the research on international cooperative strategies. It extends the three-party approach to emerging economy ventures—by developing new theory and by examining empirical data on the cooperative strategies of U.S. firms in Mexico. The research also expands the scope of theories originally developed for analysis of the organization of multinational corporations and indicates how those approaches may shed light on a very different topic: the performance of international cooperative ventures. Finally, the study advances understanding of how the success of international cooperative strategies may be influenced by relations between ventures and parent firms, particularly dependence on parent firms for different types of resources. Although practicing managers might be familiar with the idea that a degree of independence from parent firms can be important to ICV success, this concept is not well established in the literature of cooperative strategy.

The cooperative strategies examined in this study involved established business ventures with some longevity. ICVs of this type were chosen because cooperative strategies evolve over time and ventures may not achieve patterns of operation that support long-term performance until they have been through earlier stages of development. Criteria for judging performance also can be expected to differ between established ventures and cooperative strategies that are still in formative stages.

The paper is organized into two major sections. The first part of the paper examines the roles of the three parties in cooperative strategies—the foreign partner, the local partner, and the venture—and outlines a set of general premises about the links between resource contributions by participant firms and strategic performance. These ideas provide the basis for a structural model of the relationships between resource contributions and strategic performance. The second part of the paper presents an empirical investigation of this structural model using data on the international cooperative strategies of U.S. firms in Mexico. Latent variable partial least squares (PLS) techniques are used to derive estimates of relationships between resource contributions of partner firms and the evaluation of cooperative venture strategic performance by U.S. managers. The paper concludes by discussing some of the implications of this work for research on international strategy and the management of international cooperative ventures.

COOPERATIVE STRATEGIES: A THREE-PARTY APPROACH

This study draws upon the OLI perspective associated with Dunning (1988), Teece (1981, 1986), and others. However, certain key assumptions of the OLI approach are altered for research on ICV performance. The OLI approach was developed to explain the economic conditions that favor one specific form of organization—the multinational corporation—under the assumption that observed forms of organization are efficient. This study is not concerned with the occurrence or likelihood of a specific form of organization or governance, and it does not assume economic efficiency.

Rather than assuming full internationalization and economic efficiency, we are interested in factors that may affect the relative performance of a variety of ICVs. Because the research deals with strategic performance rather than form of organization or governance of ventures it is necessary to adopt a broad definition of international cooperative venture (Contractor and Lorange, 1988). Prior research has indicated that both shared-equity and nonshared-equity cooperative ventures may operate with considerable autonomy and face similar challenges (Hagedoorn, 1990; Johnson *et al.*, 1997; Osborn and Hagedoorn, 1997; Sarkan, Cavusgil and Evirgen, 1997; Yan and Gray, 1994). This study emphasizes issues that may affect performance in a variety of different cooperative ventures, and shared-equity joint ventures are not distinguished from other types of cooperative ventures for those purposes (Florin, 1997; Mjoen and Tallman, 1997).

An OLI perspective on resource dependence

The OLI perspective has argued that international business enterprises require a combination of strategic resources provided by foreign firms and locally based resources in order to achieve competitive advantage (Dunning, 1988; Teece, 1986). The OLI work focuses on multinational corporations and emphasized the conditions that make

wholly integrated enterprise efficient. However, more recent research has begun to apply these concepts to a broader spectrum of organizations, arguing that the creation of a complementary combination of resources or capabilities from partner firms is one of the most important objectives of international cooperative strategy (Contractor and Lorange, 1988; Chi, 1994; Tallman, Fladmoe-Lindquist, and Robins, 1997; Madhok and Tallman, 1998). As emerging economies open to global competition, firms must deal with a wide range of international competitors at the same time that they face increased pressure for efficiency in local operations (Teece, 1983). The dual imperatives of global and host country markets demand two different types of resources: strategic resources that support international competitive advantage and complementary resources that promote success in the local market (Tallman *et al.*, 1997).

Implementation of cooperative strategies also requires a variety of resources that may not be efficiently acquired from either foreign or host country partners. Two different types of resources may have this characteristic: basic inputs such as raw materials that can be directly sourced in competitive markets, and less tangible resources such as operating routines that are most effectively developed by personnel who are directly involved in the cooperative ventures. These two types of resources share the common feature that it is not efficient for an ICV to acquire them through transfer from either the foreign or local partner. For the purpose of this paper, this third category of resources will be termed 'operating resources.'

These three general types of resources—strategic, local, and operating—differ both in the functions they can perform in a cooperative strategy and in the degree to which they are traded in competitive markets (Barney, 1986a). These differences in functions and markets for different types of resources help to define the roles that participant organizations can be expected to play in international cooperative strategies. Table 1 provides a brief summary of key characteristics of the resources discussed below.

Role of the foreign partner: strategic resources

As noted above, the OLI approach to multinational enterprise suggests that the successful entry of a firm into international markets is driven by possession of firm-specific strategic assets. The foreign partner plays a critical part in contributing strategic resources that can help an ICV succeed in the face of global competition. As companies in emerging economies have gained greater access to international sources of capital, goods, and services, earlier roles of foreign partners as conduits between world markets and local ventures have diminished in importance. In order to have an impact on venture performance, multinational firms must now bring resources to ICVs that cannot be readily obtained through the market (Beamish *et al.*, 2000; Chi, 1994; Teece, 1981). The resource-based view of the firm offers insight into the types of resources that may perform this role.

A resource-based view of foreign partner contributions

The resource-based view of the firm argues that strategic resources have certain distinctive market characteristics. Resources that are scarce, valuable, and difficult to imitate or substitute are critical to strategic advantage (Barney, 1991; Connor, 1991; Winter, 1987). These strategic assets may be tangible resources such as patents, licenses or brand names, or less tangible capabilities such as general management skills (Barney, 1986b; Mahoney and Pandian, 1992; Winter, 1987).

Contributing strategic resources to an ICV can be important to the foreign partner for two reasons: leveraging resources to new markets represents one of the key reasons for a foreign firm to pursue any type of international strategy, and strategic resources provide a means by which the foreign partner can make a distinctive contribution to the competitive advantage of a cooperative venture. Just as an ICV must achieve competitive advantage over potential rivals, the foreign firm must offer advantages over alternative partners and non-ICV strategies in order to be an attractive partner (Hennart, 1988; Kogut, 1988).

The stock of resources developed by a multinational firm in prior domestic and international operations is a major factor that drives entry into new markets (Dierickx and Cool, 1989; Fladmoe-Lindquist and Tallman, 1994). These strategic resources also can provide competitive advantage in emerging economies. For example, Wal-Mart has developed world-class capabilities in organizing and managing mass retailing operations in the United States, including supply chain management, logistics, inventory management, and information

systems. These strategic resources have provided a basis for the firm to expand operations into Latin America and Asia through a number of cooperative ventures. Wal-Mart profits by increasing the scope of utilization of their strategic assets, and their cooperative ventures gain competitive advantage over rivals that do not have access to management skills comparable to those provided by Wal-Mart. Examples of similar strategies are widespread, including the cooperative strategies of Loctite in many emerging economies, Starbucks' cooperative ventures with Jardine in Asia, or Volkswagenwerk's cooperative strategies for supplier development in Brazil or China.

The logic for geographic diversification through cooperative strategy is similar to the logic for product market diversification. Just as product diversification allows firms to achieve scope economies by sharing the services of strategic assets across new products (Penrose, 1959; Teece, 1981; Williamson, 1985), geographic diversification offers a means to achieve greater scope in the utilization of strategic assets across new markets (Kogut, 1988). This leads to a basic premise: *Managers in foreign partner firms can be expected to see contributions of strategic resources by their firms as having a positive effect on ICV performance.*

Role of the host country partner: complementary location-specific resources

International ventures are commonly formed by firms in response to a need for location-specific skills or resources for operation in an overseas market (Dunning, 1988: Teece, 1983). Local (location-specific) resources may include distribution channels, local brands, political influence, human resource management skills, or any other capabilities that are idiosyncratic to a specific locality. When local resources of this type are controlled by a host country firm—and not obtained equally readily through the market—a cooperative venture may offer an effective means for a foreign partner to expand into a new area (Kogut and Zander, 1993).

The capacity of a host country organization to supply local resources to a venture is one of the basic reasons for the existence of any form of international strategy (Dunning, 1988). Without contributions of local resources by the host country entity, a strategy of this type cannot be expected to

offer advantages over trade (Hennart, 1982). Traditional Ricardian notions of comparative advantage may help to explain why a foreign firm pursues a position in the host country, but it is the ability of the local partner to supply complementary resources for the exploitation of those comparative advantages that makes a cooperative strategy attractive (Tallman *et al.*, 1997).

Local resources of this type may not be freely available in emerging markets for a number of reasons. One of the defining features of an 'emerging' economy is the limited historical development of local industry. The development that has taken place in many of the emerging economies of Latin America and Asia has been dominated by a limited set of large industrial or commercial groups such as the Garza-Sada interests in northern Mexico or Lucio Tan's family of companies in the Philippines. A foreign firm that is seeking a capable local partner often will have a narrow range of choices in that type of economy.

Wal-Mart's entry into Mexico again provides a good example. Few Mexican retail organizations could have offered Wal-Mart the local resources in distribution, locations, and name recognition that CIFRA possessed. If Wal-Mart had chosen not to deal with one of a few established large Mexican retail organizations, their entry into Mexico would have been deeply problematic. The pure market-based alternative of building a comparable organization from inputs not controlled by these large Mexican companies might not have been feasible, and it undoubtedly would have been very costly and time-consuming.

As their cooperative strategies develop and mature, foreign firms actually may face more severe 'failure' of markets for local resources. Foreign and host country partners may develop working relationships that are specialized to the cooperative strategy. These transaction-specific investments increase the reliance of the foreign firm on the local partner and cement the local partner's position as a source of local resources (Kogut and Zander, 1993; Teece, 1981).

The key role that the host country partner in a cooperative strategy can play in providing complementary resources suggests another basic premise: *Managers in foreign partner firms can be expected to see contributions of local resources by host country partners as having a positive effect on ICV performance.*

Role of the venture: efficient resource acquisition

Complementary contributions of local and strategic resources may be vital to alliance success, but they are not the only types of resource transfers from parent firms that may affect strategic performance. Certain forms of dependence on parent firms may be costly for ICVs, either because market sourcing of resources would be cheaper or because the resources involved can be developed internally with greater efficiency than they can be transferred to the ICV from parent organizations. Dependence upon parent firms for either of these types of resources may represent an inefficient solution to the ICV's needs and reduce overall performance. For the purposes of this paper, resources that are not efficiently acquired from either partner firm are termed 'operating resources.'

Transaction-cost considerations

Uncomplicated transactions involving tangible goods with little uncertainty about price or quality may be most efficiently carried out through market exchange (Williamson, 1985). Commodity-like goods such as raw materials often fall into this first, low transaction-cost category. Resources of this type can be acquired through market sources, and partner firms may expect cooperative ventures to develop their own sourcing relationships. Continued reliance upon a foreign partner for supplies of resources such as raw materials entails unnecessary costs and can compromise the performance of otherwise established ICVs. Certain international fast food operations in Mexico, for example, experienced difficulty for a number of years in developing local sources of supply that met reliability and quality standards set by U.S. partner organizations. Resulting dependence upon imports from U.S. partner firms damaged strategic performance both by inflating costs and by further inhibiting the development of more efficient sources of supply for the ventures.

At the other end of the transaction-cost spectrum, it may be very costly or inefficient to attempt to acquire certain types of intangible resources by either market sourcing or interorganizational transfer. Reliance upon U.S. partner firms for operating routines or procedures may pose this type of problem for ventures. Routines and operating procedures commonly have important idiosyncratic or context-specific features that are imperfectly transferable, and the implementation of effective operating procedures can involve path-dependent learning that produces different results in different organizations (Kogut and Zander, 1993; Nelson and Winter, 1982; Polanyi, 1975). The effort to transfer operating procedures from foreign firms may require costly ongoing involvement of expatriate personnel in operational aspects of the venture and still be relatively ineffective (Teece, 1981).

Operating problems described by a U.S. manager of an ICV manufacturing company in Mexico provide a good illustration of the costs that can accompany this type of dependency. The addition of new machinery or upgrade of existing production equipment in the venture typically required extensive involvement of U.S. personnel to assist with basic features of process redesign such as layout of production areas and sequencing work flow. The venture had not developed the capacity to create new operating procedures in response to relatively modest technical changes in production. Managers in the U.S. partner company viewed this as a serious deficiency, and the regular shuttle of personnel across the border significantly increased costs.[1]

For the purpose of this analysis, both of these types of resources can be combined under the single rubric of operating resources. Dependence upon the foreign parent for either type of operating resources can be expected to have a negative impact on performance. In the case of tangible operating resources such as materials, the negative effect is a result of costly sourcing. In the case of less tangible operating resources such as routines, the negative effect is a consequence of the imperfect transferability of the resources between firms. Both cases lead to a common expectation: *Managers in foreign partner firms can be expected to see dependence upon their firms for operating resources as having a negative effect on ICV performance.*

The three premises outlined above suggest a straightforward view of resource dependence relationships and performance for international cooperative strategies in emerging economies. Successful ICVs rely on foreign parent firms for certain strategic resources; they rely on host country parents for locality-specific resources; and they

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[1] Personal communication from a manager who requested anonymity.

Table 1. Resource typology

	Type of resource			
	Strategic	Local	Operating (tangible)	Operating (intangible)
Importance to ICV	Strategic advantage	Effective local operations	Cost-competitive inputs	Efficient operations
Efficient source	Foreign partner	Host-country partner	Market procurement	Internal development
Market characteristics	Scarce, controlled by foreign parent	Semi-scarce: limited market, co-specialization	Competitive market	Organization-specific
Examples	Patents mgt. capabilities	Local distribution channels	Raw materials	Operating routines

achieve independence in a variety of resources that can best be sourced through the market or developed internally (see Table 1). The failure to develop and sustain these relationships can be expected to compromise performance.

Effect of strategic resources on operating resources

Contributions of strategic resources from the foreign partner also may aid the development of operating resources by an ICV and thus reduce the venture's reliance on partner firms for operating resources. Strategic resources include capabilities such as general management skills that may raise the level of professionalism in the venture and help it to achieve a degree of organizational development that reduces dependence on the foreign partner for resources such as operating routines and expatriate support. Ongoing difficulties experienced by ventures in developing local sources of operating resources such as raw materials also may signal weaknesses in management that can be relieved by parent firm assistance in management development. This leads to the expectation that: *Contributions of strategic resources by foreign partners will have a negative effect on contributions of operating resources.*

Evaluation of performance

Although resource contributions of the types described above may all affect the success of a cooperative strategy, their impact on performance may

be achieved in different ways. It has been common to treat venture performance as a unitary construct (Geringer and Hebert, 1989). However, the use of a single construct may suppress important information about the mechanisms by which performance at operational levels influences strategic outcomes. Strategic measures of performance such as growth, sales, or profitability are, in part, outcomes of performance in areas of operations such as human resource management or quality control. Certain types of resource contributions may be linked to strategic performance primarily through their effects on these operational areas, while others may have a direct impact on strategic performance. In the former case, operational-level measures of performance effectively function as intervening variables between resource contributions of partner firms and evaluation of strategic performance.

Human resource development and quality control are probably the two most important areas of operating performance that have the potential to play this intervening role between inputs to a venture and strategic outcomes. They are among the concerns most widely cited by managers of emerging economy ventures, and they may be the best researched areas of ICV operations (e.g., Flynn, 1994; Napier and Vu, 1998; Zeffane and Rugimbana, 1995). However, the selection of HR and quality performance as constructs for this analysis is not meant to imply that they are the only factors that might play this role for ICVs. HR and quality performance stand out among constructs of this type, and parsimony in modeling argues for

the selection of a limited set of strong concepts (Johansson and Yip, 1994; Wunsch, 1988).[2]

Contributions of strategic resources by the foreign partner would be expected to have positive effects on both HR performance and quality performance. Contributions of local resources by the host-country partner would be expected to have positive effects on HR and quality performance. On the other hand, contributions of operating resources by the foreign partner would be expected to have negative effects on both HR and quality performance.

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[2] The integration of emerging economies into the global system creates pressures for better HR and quality performance in several ways. Technological development has been rapidly reducing advantages associated with cheap unskilled labor in many industries (Sargent and Matthews, 1997). This results in escalating capital intensity and growing demand for more skilled personnel and better HR development in emerging economy industries (Minehan, 1996). Reduced trade barriers also mean that the output of ICVs must meet world quality standards in order to be viable (Fleury, 1995). Products face a wide range of competitors in export and domestic markets, and quality standards must be considerably higher than levels that may have been acceptable for domestic production under protectionist regimes. Failures in many noncompetitive small and middle-sized companies in emerging economies have already been precipitated by the opening of domestic markets to international competition, and the trend can be expected to continue with further global economic integration.

These relationships suggest a variety of direct and indirect effects of resource contributions on strategic performance. Many of these effects are interdependent, and they can best be understood as a system of relationships represented in a structural model. Figure 1 outlines a structural model that includes these multiple dimensions of performance, relationships among the different forms of performance, and potential links between resource contributions and strategic performance.

EMPIRICAL ANALYSIS OF RESOURCE CONTRIBUTIONS AND STRATEGIC PERFORMANCE

Data

The relationships in Figure 1 were examined using data collected in a survey of U.S. firms with ICVs in Mexico. Information from the American Chamber of Commerce in Mexico (AmCham) provided a basis for identifying a sample of 500 U.S. firms that potentially had active ventures in Mexico. Detailed questionnaires were sent to managers in these firms identified as having ICV responsibilities, and 95 responses were received. Seventy-two of the respondents supplied data on current ICVs. This response rate
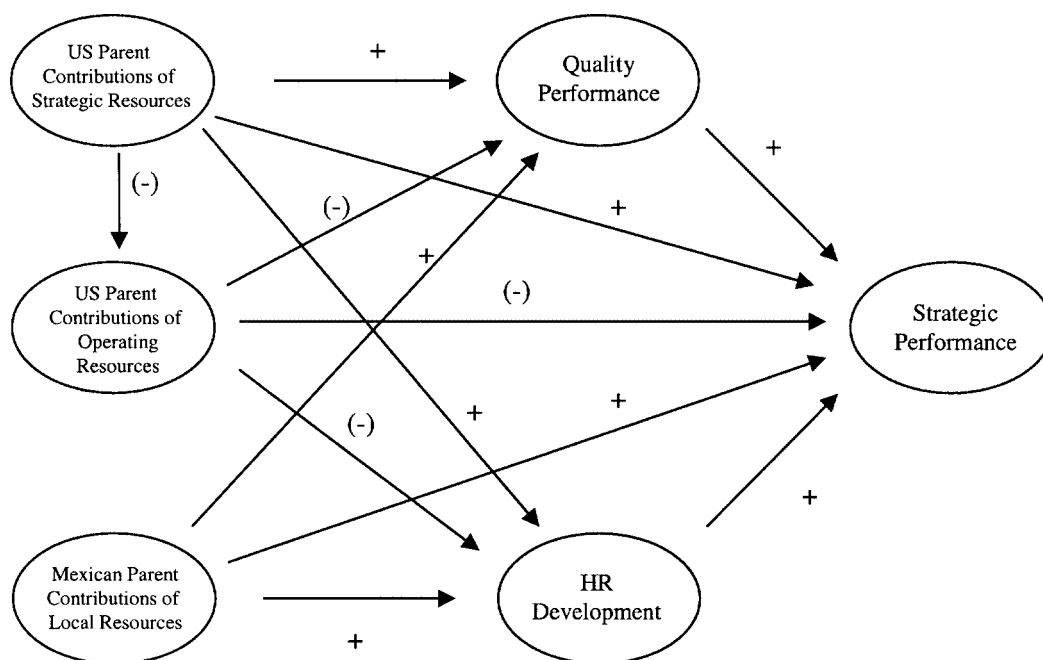

Figure 1.   Structural model, multiple dimensions of performance

is within expectations for mailed surveys of this type (Hill, Hwang, and Kim, 1990), and it may significantly underestimate the true proportion of the firms with active ICVs that responded to this survey.[3]

Items dealt with resource contributions of U.S. firms and their Mexican partners to ICVs, the performance of cooperative strategies, the objective of U.S. firms, and a variety of descriptive data on the U.S. parent firms of respondents. Apart from the descriptive company data, the majority of items were collected using Likert-scaled items described below. A general profile of the sample and description of survey items is included in the Appendix.

Measures

Resource contributions

Data on the resource contributions made to ICVs by parent firms were derived from a set of items in which respondents scored the importance of contributions of each of several resources using Likert scales. These items ranged from very tangible resources such as raw materials or patents to much less tangible ones such as procedures and routines. The items used in the survey were based on Schaan and Beamish (1988). Separate ratings were carried out for contributions by the U.S. parent firm and the Mexican parent. The Appendix includes details of survey items.

Venture performance

Respondents rated the performance of ventures on a number of different dimensions, including overall strategic performance, growth, sales, management development, labor productivity, quality of goods and services, and several other key strategic and operating areas. These items were based on work by Stopford and Wells (1972) and Geringer (1988). Following Geringer (1988), ratings of performance also used 5-point Likert scales (see the Appendix).

These survey measures of venture performance were adopted for a number of reasons. More 'objective' measures of firm performance are generally based on publicly reported data on accounting performance or securities market data. International cooperative strategies typically do not involve publicly traded entities, and accounting may not be entirely disaggregated from partner firms. These considerations have led prior researchers to use self-report approaches of this type, and validated measures were therefore available for this study (Geringer, 1988).

Validity of measurement

Like the great majority of survey research, this study uses data collected from single respondents. This type of data inevitably raises questions about artificial response consistencies due to 'context effect' (Harrison, Mclaughlin, and Coalter, 1996). Several aspects of the study were intended to reduce context effects such as common-method variance. Instrument design followed guidelines suggested by Harrison *et al.* (1996), and multiple-item constructs were used in the data analysis. Context effects tend to be domain-specific and survey data on business performance generally show high validity (Venkatraman and Ramanujam, 1987). Post hoc analysis was carried out using Harmon's single-factor test (Podsakoff and Organ, 1986), and it showed no evidence of artificial response biases.[4]

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[3] Although the crude response rate of 19 percent is within expectations for mailed surveys (Hill *et al.*, 1990), it may significantly underestimate the proportion of the firms with active ICVs that responded to this survey. The information supplied by the AmCham that was used to define the sampling frame appears to have overstated the number of U.S. firms that have active ICVs in Mexico. Examination of historical AmCham data and discussions with managers suggest that firms without active ventures may have constituted a significant fraction of the sample and an even larger proportion of the nonrespondents. However, more precise estimation of the number of non-ICV firms inappropriately included in the sample was impossible without breach of respondent anonymity. Survey responses were required to be anonymous, and therefore it was not possible to differentiate firms that failed to respond because they did not have active ICVs in Mexico from nonrespondents with active ICVs. An initial screening question asked all respondents to return the survey and indicate whether they had active ICVs in Mexico, but there is reason to believe that firms without active ICVs may have been biased toward nonresponse. The actual response rate—relative to the subgroup of firms in the sample with active ICVs—is likely to have been substantially higher than the apparent rate based on the AmCham sampling frame.

[4] Single respondent self-report data of the type employed here are very common in organizational research, and a majority of all social research involves self-report surveys (Harrison *et al.*, 1996). The fact that multimethod validation of responses cannot be carried out with data of this type has been a source of growing concern to psychometricians (e.g., Podsakoff and Organ, 1986). However, the importance of self-report surveys as a tool of social research also continues to grow, and self-report measures have been described as 'virtually indispensable in many research

Methods

Specification of the structural model described above involved several steps, including identification of potential indicators for unobservable constructs, refinement of construct definitions, and specification of relationships among constructs. Potential indicators for each of the constructs in the model were initially identified on theoretical grounds. Indicators then were examined for reliability, convergent and discriminant validity, and construct definitions were refined as appropriate.

A data reduction process that has become common in PLS modeling was used to refine the model (Falk and Miller, 1992; Fornell, 1982; Johansson

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contexts' (Avolio, Yammarino, and Bass, 1991:571). Few serious critics argue for abandonment of survey research (Harrison *et al.*, 1996); instead, researchers have emphasized means of analyzing and improving validity of research based on single respondent, self-report data (Avolio *et al.*, 1991; Harrison *et al.*, 1996).

A variety of tactics were used to reduce context effects. The survey instrument was structured with noncontiguous scales; independent and dependent measures did not have overtly similar content; and the 'auxiliary' theories connecting measures to constructs are not likely to be related to primary theories of relationships among constructs (Blalock, 1985). Items used in the dependent measures also were not novel in content or narrowly defined. Narrow or novel items tend to be more problematic because respondents may be biased by previous scale responses in situations where there are fewer related inputs in long-term memory that can assist in formation of responses (Harrison *et al.*, 1996).

Multiple-item constructs were used in the data analysis. Response biases have been shown to be more problematic at the item level than the construct level (Avolio *et al.*, 1991; Harrison, *et al.*, 1996; Podsakoff and Organ, 1986). This is an area where structural modeling approaches such as PLS and Lisrel are useful in avoiding problems that might be associated with item-level analysis.

Context effects also tend to be domain specific (Avolio *et al.*, 1991; Podsakoff and Organ, 1986), and there is reason to believe that survey data on business performance have a relatively high level of validity. In a quasi-experimental design, Venkatraman and Ramanujan (1987) found that multimethod/multitrait and confirmatory factor analysis indicated good predictive validity for subjective measures of performance and good convergence between measures based on secondary data and survey measures. Dess and Robinson (1984) also have found support for the validity of self-report measures of business performance, and Geringer and Hebert (1989) found convergent validity between the type of measures that were employed in this study and secondary data. Self-report measures of performance have been used in a number of other recent studies of international strategy including Johansson and Yip (1994) and Morrison and Roth (1992).

A post hoc analysis of potential context effects in these data was carried out using techniques outlined by Podsakoff and Organ (1986). The results of this analysis also suggest that artificial response biases may not be significant. Data were examined using Harmon's principal components approach, and indicators of independent and dependent constructs did not load on common factors.

and Yip, 1994). The validity and reliability of indicators in the outer or measurement model were examined and latent constructs were refined by eliminating unreliable indicators and creating constructs that had greater validity and reliability. This was followed by reestimation of the outer model and reexamination of constructs for validity and reliability (Falk and Miller, 1992; Graham, Mintu, and Rodgers, 1994). Validity and reliability analysis for the final model are discussed below.

Indicators of latent constructs in the model were of two types: formative and reflective. Resource contributions of parents were all treated as formative indicators in the model of ICV performance. The underlying constructs—Parent Contributions of Strategic Resources, Parent Contributions of Local Resources, and Parent Contributions of Operating Resources—were conceptualized as composites of different specific resource contributions. These constructs are meaningful in the context of the analysis, but they would not necessarily be intrinsically meaningful if divorced from that context.

Indicators of venture performance, on the other hand, were conceptualized as reflective indicators. Operational areas of performance such as quality control and human resource development were seen as intrinsic phenomena reflected in indicators such as quality of goods or management development. Indicators of strategic outcomes were also seen as reflective measures: growth, sales, and meeting strategic goals were all seen as reflections of the more general strategic performance of the venture.

Parent Contributions of Strategic Resources

Several items were identified as potential contributions of strategic resources by U.S. parent firms. The candidate items included management personnel, technical/professional skills, brands, and patents, copyrights and licenses. Management and technical/professional personnel and skills were seen as particularly important due to the fact that they represent transfers of less tangible skills that may be difficult to accomplish without ICVs (Hennart, 1988; Kogut and Zander, 1993). Global brands and patents or copyrights are more readily traded through markets by licensing and therefore may be less fundamental to ICV strategy (Barney, 1986a; Lieberman and Montgomery, 1988; Teece, Pisano and Shuen, 1997). Initial examination of

the measurement model suggested that brand name was not likely to be a reliable indicator and had little convergence with the other indicators of the construct. Brand was eliminated as an indicator and the remaining indicators of strategic resource contributions were retained (Graham *et al.*, 1994; Johansson and Yip, 1994).

Parent Contributions of Local Resources

Potential local resource contributions by Mexican parents included labor, distribution channels, and local brands. Initial refinement of the measurement model suggested separation of labor from brands and distribution channels as an independent construct. Two constructs for Mexican local resources were used in the final model: contributions of marketing resources (brands and distribution channels), and contributions of labor.

Parent Contributions of Operating Resources

Indicators of operating resource contributions were selected from among the resource contributions of U.S. parent firms. Indicators included contributions of materials and contributions of operating procedures and routines. U.S. Parent Contributions of Operating Resources was a single latent construct.

Model definition

Figure 2 illustrates the full structural model, including construct indicators and paths among latent constructs. Contributions of Strategic Resources by U.S. parent firms hypothetically had direct positive effects on strategic outcomes as well as indirect effects through Human Resource and Quality Performance. Contributions of strategic resources also were expected to have a negative link to Contributions of Operating Resources, as indicated above.

Contributions of Operating Resources were expected to affect strategic performance both directly and indirectly, through their effects on HR Performance and Quality Performance. Effects of Contributions of Operating Resources on HR Performance and Quality Performance were anticipated to be negative, with indirect negative effects on strategic outcomes through the positive paths from HR and quality to Strategic Performance. Direct effects on Strategic Performance also were expected to be negative.

The two different local resource constructs had different logical connections to strategic performance. Contributions of Marketing Resources were expected to have a direct positive effect on strategic outcomes, but there was no conceptual basis for any indirect effects through Quality Performance or HR Performance. Contributions of labor, on the other hand, were expected to operate primarily through intermediate effects on Quality and HR Performance, although the possibility of a direct effect on Strategic Performance also was considered.

Model estimation

Measurement and path models were estimated using latent variable partial least squares (PLS) analysis. PLS techniques are particularly useful for this type of analysis for three reasons: they make more modest demands upon data than covariance-matrix based structural modeling approaches such as LISREL or EQS, they accommodate measurement models that include both reflective and formative indicators, and they are well suited to modeling in situations where the objective of analysis is assessing predictive relationships among variables rather than testing a general theory (Falk and Miller, 1992)

The limited assumptions about underlying distributions in PLS models also preclude most parametric forms of significance testing for path coefficients (Falk and Miller, 1992; Fornell and Larcker, 1981a). However, significance of path coefficients in PLS models conventionally is estimated using the jackknife resampling technique (Miller, 1974; Mooney and Duval, 1993), which tends to produce conservative estimates of significance (Falk and Miller, 1992). Jackknife estimates of standard error were derived for path coefficients in the model and significance was evaluated with *t*-statistics.

RESULTS

Outer (measurement) model

Convergent validity of the outer (measurement) model can be assessed in PLS analysis by examining the construct variance extracted by indicators, with proportions greater than 0.50 indicating satisfactory convergent validity (Fornell and Larcker, 1981a). Table 2 includes loadings of indicators
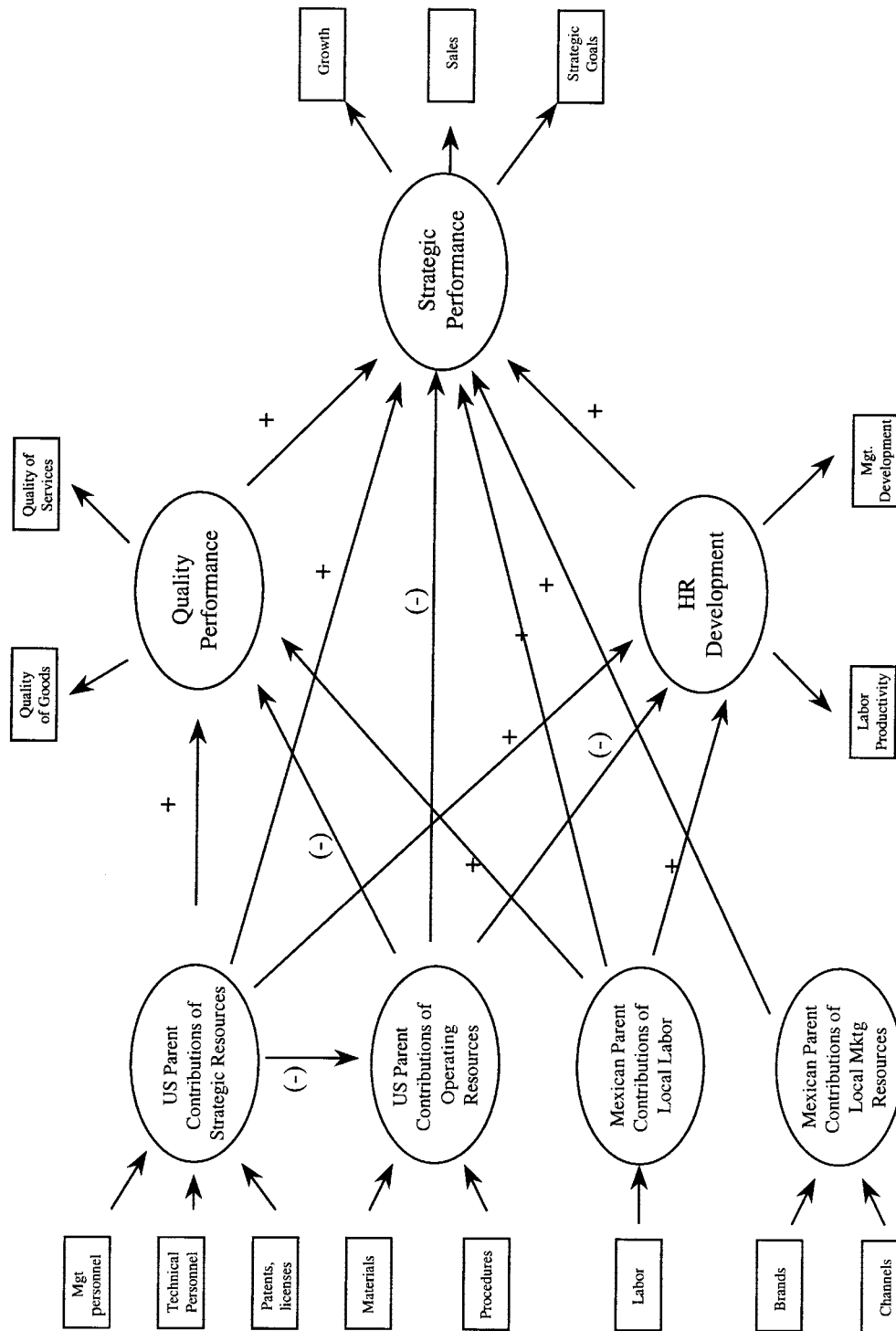
Figure 2.   Structural model for strategic performance, including indicators and constructs

Table 2.   Theta matrix of residual correlations for between-block indicator variables

		1	2	3	4	5	6	7	8
(a)	1				−0.024	0.011	0.000	0.011	−0.065
(a)	2				0.001	0.000	0.000	−0.122	0.146
(a)	3				0.029	0.013	0.000	0.073	−0.088
(b)	4						0.000	−0.026	0.150
(b)	5						0.000	0.012	−0.071
(c)	6								
(d)	7								
(d)	8								

(a)	Contributions of strategic resources
(b)	Contributions of operating resources
(c)	Contributions of local labor
(d)	Contributions of local marketing resources

Variable names
1 U.S. contributions of mgt personnel/skills
2 U.S. contributions of technical personnel/skills
3 U.S. contributions of patents, licenses
4 U.S contributions of materials
5 U.S. contributions of operating routines
6 Mexican contributions of labor
7 Mexican contributions of brands
8 Mexican contributions of channels

and proportion of variance extracted for constructs. All constructs met criteria for adequate convergent validity.

Discriminant validity can be evaluated in PLS modeling by examining the correlations between residuals of the indicator variables used to define different latent constructs (Fornell and Larcker, 1981b; Falk and Miller, 1992). If the blocks of manifest (indicator) variables are appropriately defined, residual correlations between indicators of different constructs should be minimal. Falk and Miller (1992) suggest that discrimination between constructs should be considered questionable if several residual interblock correlations are in excess of 0.20. No interblock residual correlation in this model exceeded 0.15 and most were close to zero, suggesting good discriminant validity using Falk and Miller's (1992) criteria. The theta matrix of interblock residual correlations is presented in Table 2.

Indicator reliability is generally evaluated in terms of the loadings of individual indicators on their constructs. Fornell and Larcker (1981a) argue for loadings of 70 as the criterion for satisfactory indicator reliability, while Falk and Miller (1992) suggest a somewhat less demanding 0.55 standard. All indicators met the 0.70 standard of reliability suggested by Fornell and Larcker (1981a) (Table 3).

Inner (path) model

As indicated above, significance of coefficients in the inner or path model was assessed using the jackknife, and *t*-statistics were calculated for path coefficients. Figure 3 includes path coefficients for all latent constructs. Significant path coefficients ($\alpha = 0.05$) are indicated by asterisks.

The 'soft' assumptions about distributions employed in PLS modeling preclude summary tests of model fit such as the chi-square analysis typically employed in Lisrel modeling. The focus of PLS is on assessment of relationships among the variables of a theoretically identified system rather than the creation of a comprehensive model of the dependent phenomenon. However, an approximation of the strength of an overall model can be obtained from the average explained variance in endogenous constructs (Falk and Miller, 1992). The average explained variance for the endogenous constructs of this model was 39%, with no construct below the 34% level, which suggests a strong fit between model and data. This exceeds the average variance explained in endogenous variables in models reported by Johansson and Yip (1994), Meznar and Nigh (1995), and Falk and Miller (1992). Variance explained in the dependent construct, strategic performance, was about 48%.

Table 3. Indicator loadings, residual variance, and variance extracted for constructs

Construct	Indicator	Loading	Residual	Variance extracted
Strategic resources	Mgt. personnel	0.810	0.344	0.562
	Tech. personnel	0.714	0.490	
	Patents, copyrights	0.722	0.479	
Local mktg resources	Brand names	0.990	0.02	0.743
	Dist. channels	0.711	0.494	
Local labor	Labor	1.0	0.0	1.00
Operational dependencies	Materials	0.741	0.451	0.687
	Routines	0.908	0.176	
Quality performance	Qual. goods	0.928	0.139	0.617
	Qual. services	0.740	0.452	
HR development	Labor prod.	0.928	0.139	0.869
	Mgt. development	0.936	0.124	
Strategic performance	Sales	0.778	0.395	0.760
	Strategic goals	0.910	0.172	
	Growth	0.920	0.154	
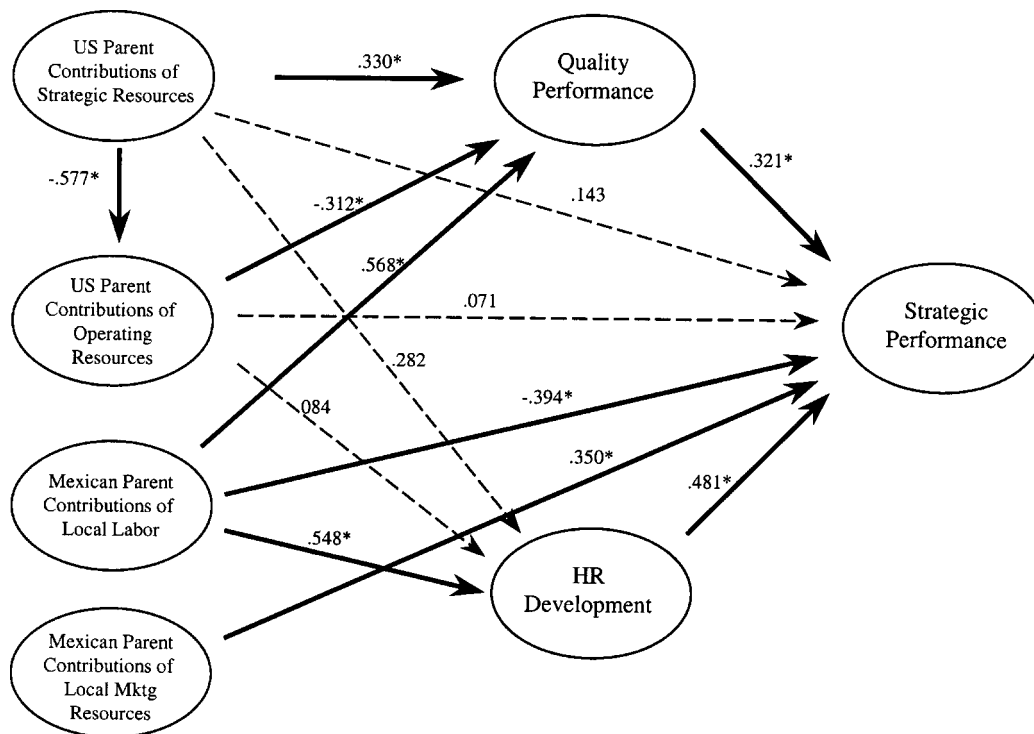
*Path coefficient *t*-statistic significant $\alpha = 0.05$, jackknife estimates

Figure 3. Inner model: path coefficients

Effects of HR and Quality Performance on Strategic Performance

HR and Quality Performance both had significant positive effects on Strategic Performance, with the effect of HR ($\beta = 0.481$) somewhat greater than quality ($\beta = 0.321$). These relationships proved to be important in the analysis because certain resource contributions affected strategic performance indirectly, through their paths to HR and

Table 4.   Effects of independent constructs on endogenous constructs

Effects on quality performance
Strategic resources:
   direct $= 0.330$
   indirect (through operational dependence) $= (-0.577)(-0.312) = 0.180$
   total $= 0.330 + 0.180 = 0.510$
Local labor:
   direct $= 0.568$
Effects on HR development
Local labor
   direct $= 0.548$
Effects on strategic performance
Strategic resources
   indirect (through quality performance) $= (0.510)(0.321) = 0.164$
Local labor
   direct $= -0.394$
   indirect (through HR Development) $= (0.548)(0.481) = 0.264$
   indirect (through Quality Performance) $= (0.568)(0.321) = 0.182$
   total $= 0.264 + 0.182 - 0.394 = 0.052$
Local marketing resources
   direct $= 0.350$

Quality Performance. Table 4 summarizes direct and indirect effects on the endogenous constructs for all independent constructs.

Contributions of Strategic Resources

The effect of Contributions of Strategic Resources on Quality Performance proved to be positive and significant. However, the paths from Contributions of Strategic Resources to HR Performance and Strategic Performance were both not significant. Contributions of Strategic Resources did have positive effects on the evaluation of Strategic Performance of the ICVs, but all effects were through their influence on Quality Performance. The two-step positive effect of Contributions of Strategic Resources through Quality Performance was $\beta = (0.330)(0.321) = 0.106$.

Contributions of Strategic Resources also had a positive effect on Strategic Performance through their influence on Contributions of Operating Resources. The negative effect of Contributions of Strategic Resources on Contributions of Operating Resources proved to be significant, as did the negative effect of Contributions of Operating Resources on Quality. The two negative paths resulted in a net positive indirect effect on Quality Performance $\beta = (-0.577)(-0.321) = 0.180$, and a two-step positive effect on Strategic Performance, $\beta = (0.180)(0.321) = 0.058$ (Table 4).

Contributions of Local Resources

Mexican contributions of Local Labor proved to have significant positive paths to both HR and Quality Performance. However, Contributions of Local Labor also had a significant negative direct effect on Strategic Performance, contrary to expectations. The indirect effects of Contributions of Local Labor on Strategic Performance were positive through their paths involving HR Performance $\beta = (0.548)(0.481) = 0.264$, and Quality Performance $\beta = (0.568)(0.321) = 0.182$, for a total positive effect: $\beta = 0.182 + 0.264 = 0.446$. At the same time, the direct effect was negative ($\beta = -0.394$), with the result that the net effect of Contributions of Local Labor on Strategic Performance was only $\beta = 0.446 - 0.394 = 0.052$. The direct path from Mexican partner Contributions of Marketing Resources to Strategic Performance was positive and significant ($\beta = 0.350$).

Contributions of Operating Resources

As indicated above, contributions of Operating Resources had a negative effect on quality performance ($\beta = -0.312$) and therefore a negative indirect effect on Strategic Performance as well ($\beta = -0.110$). The direct path between Contributions of Operating Resources and Strategic Performance was not significant, despite expectations

to the contrary. The path between Contributions of Operating Resources and HR Performance also proved not to be significant.

DISCUSSION

The analysis generally supported the view of ICV strategies suggested by the model developed above, although it also included a few surprises. Contributions of strategic resources by U.S. parents and contributions of local resources by Mexican parents had the anticipated positive effects on performance, while U.S. contributions of operating resources had a negative indirect effect. Contributions of strategic resources also appeared to diminish contributions of operating resources, creating an additional indirect positive effect on strategic performance.

The manner in which the different types of resource contributions achieved their effects was more complex. The effects of contributions of strategic resources were positive, but the relationship proved to be entirely indirect, through quality performance. The path from contributions of strategic resources to HR performance was not significant, with the result that there also was no indirect effect through HR performance.

This may reflect the fact that mature ventures operating in emerging economies often use local personnel at many levels from the shop floor to management. Cross-cultural differences may render foreign parent contributions less effective in high cultural content activities such as HR development (Amante, 1993; Huo and VonGlinow, 1995; Napier and Vu, 1998). At the same time, methods for quality engineering pioneered in North America, Japan, and Western Europe have enjoyed some success in firms in emerging economies (Lakhe and Mohanty, 1994). Standards such as ISO 9000 have been relatively widely embraced, and TQM programs have been adapted to a broad range of different settings (Farahmand, Becerra and Green, 1994). Foreign parent firms currently may be more capable of offering transferable management and technical skills in the area of quality management than in human resource development.

The indirect effect of Contributions of Strategic Resources on Quality Performance through reduction of Contributions of Operating Resources suggests that involvement of foreign parents may be

more useful at strategic than operating levels of management. Foreign parents interested in improving ICV strategic performance thus may find that emphasis on building ICV management capabilities is more effective than devoting resources to managing the venture at operational levels. Although this is not surprising, international companies commonly attempt to exert close control of ICVs in newly industrializing countries. The finding that supply of labor by the local partner appears to have a positive effect on quality underscores the significance of local control of host country activities and suggests that foreign partner firms need to be able to take a strategic role while encouraging the autonomy of host country partners in certain areas of operation.

The fact that contributions of labor by the Mexican parent proved to have a negative direct effect on Strategic Performance at the same time that they had positive indirect effects through HR Performance and Quality Performance was particularly interesting. The magnitude of the two positive indirect effects was comparable to the negative direct effect, and the relationship between Contributions of Local Labor and Strategic Performance might have disappeared in an approach that treated performance as a unitary construct. The two positive indirect effects are consonant with the ideas laid out above, but the negative direct effect was unexpected. It is possible that the negative direct effect signals underlying costs or constraints on growth associated with reliance upon the local parent for labor. If that is the case, labor may have some ambiguity as a resource to be acquired through the local partner. Reliance upon the local partner may provide a superior pool of labor that boosts quality and accelerates human resource development, but it also may be more costly or difficult than sourcing labor in the open market and may prove to be problematic for the long-term development of enterprises in emerging economies.

CONCLUSION

The study has a number of implications for theoretical and empirical research on cooperative strategies for emerging economies. The analysis of ICVs as complex three-party arrangements appears to be a promising approach, and the proposed adaptation and extension of OLI perspectives provide insight into the relationships between ICVs and

parent firms. In combination with concepts from resource-based and transaction-cost theories, these ideas help to map out different areas where ICV dependence or autonomy may be important.

Theoretical implications

The modifications of the OLI perspective in this research are important. When assumptions of full internalization and economic efficiency are suspended, the perspective can yield valuable insights into the strategic roles of parent firms in international cooperative strategies. Resource-based and transaction-cost theories supply guidelines for understanding how different types of market failure set parameters for interdependencies among ICV participants. This modified OLI analysis—in which both a broader range of market failures and a broader range of organizational responses are considered—has the potential to be a valuable addition to the recent stream of work extending the OLI perspective. Much of the work in this vein has been purely conceptual, and this study takes a useful step toward grounding those ideas in empirical evidence. Further work in this area may provide a more detailed view of the ways that different market conditions and competitive market structures help to define strategic linkages among the participants in cooperative ventures.

The key empirical insight to emerge from this study is that a balance of ICV dependence and independence is important to the success of strategies for emerging economies. Utilization of certain types of strategic and local resources supplied by parent firms appears to support venture performance, while other types of contributions by parents may be detrimental. These aspects of cooperative strategies emerge only with the three-party view of ICVs. If ICVs are viewed solely as associations between parent firms, the liabilities associated with venture dependence on foreign parent firms disappear.

Empirical implications

The empirical analysis is revealing in a number of ways. In addition to providing some support for the general approach to understanding ICV strategies, it also offers insights into how interdependencies among venture participants are structured. The ambiguous relationship between Contributions of Labor by the emerging economy parent and ICV

success is interesting, as is the fact that Contributions of Operating Resources affect Strategic Performance primarily through Quality Performance. The treatment of performance as a set of interrelated constructs rather than a single construct provides valuable insights into relationships between different forms of dependence and performance. Important underlying effects of resource contributions on performance would have disappeared in a model that relied upon a unitary performance construct. This approach to performance is unusual in the work on ICVs, and it has the potential to make an important contribution to future research on cooperative strategies.

This research also has a number of empirical limitations. It can provide insight into factors that influence the evaluation of cooperative strategies by foreign parent firms, but there is a range of issues that it cannot address. The study focuses on performance in established cooperative ventures, and many of the transient problems that may result in early failure of ICVs are excluded from the analysis. Because the study takes the vantage point of the foreign partner, differences between partners in the evaluation of strategic performance also cannot be examined. This focal-firm perspective is a basic feature of strategic research—and makes it possible to view the situation from the standpoint of decision-makers—but we cannot assume that managers in Mexican partner firms would share the same views as their U.S. counterparts (Gillespie and Teegan, 1995). Mexican and U.S. partners may have divergent strategic objectives, and operating performance that is satisfactory to one side may be inadequate for the other. A separate, parallel study would be required to explore the strategic perspective of the host country partner.[5]

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[5] This asymmetrical, focal-firm view is an intrinsic feature of the strategic perspective (Ansoff, 1965; Beamish, 1988; Porter, 1980; Madhok and Tallman, 1998). A strategy that is highly successful for a firm may simultaneously be costly to the firm's competitors, customers, suppliers, or partners (Klein, Crawford, and Alchian, 1978; Porter, 1980; Teece, 1987). For example, an alliance strategy that involves expropriation of a partner's technological know-how might be very successful from the standpoint of the firm gaining the technology—and barely tolerable for the alliance partner (e.g., Reich and Mankin, 1986). This is an important area where strategic approaches to ICVs may differ from a good deal of organizational research on cooperative ventures. Organizational research that focuses on criteria such as mutual satisfaction or longevity of cooperative ventures cannot be assumed to reflect the strategic objectives of any specific firm within a cooperative venture. In extreme cases, a cooperative venture that is unacceptably costly or unsatisfactory to either parent firm will fail; however, there is a

The applicability of this approach also may be limited in some cases by the role taken by government. ICVs that are subject to substantial state control may not acquire the same level of autonomy as ICVs in less regulated settings. This is particularly likely to be an issue in situations where the local partner is closely tied to a government bureau or agency. Sensitivity to the political context is important in any effort to generalize the model across emerging economies.

Implications for management

The research may also offer some practical insight into the management of ICVs in emerging economies. The negative relationship between contributions of Strategic Resources and Contributions of Operating Resources suggests that general management assistance from foreign parents may play an important role in organizational development for ICVs. The fact that Contributions of Strategic Resources had significant effects on Strategic Performance only through effects on Quality suggests that successful long-run strategies may require action by foreign parents to help build the independent operating capabilities of ICVs.

The research provides some general support for one of the fundamental concepts that has emerged over time from the OLI perspective: the idea that a combination of strategic resources from foreign partners and local resources from host country partners is vital to success. However, the research also contains the message that involvement of the foreign parent at operational levels may be detrimental to cooperative ventures. This observation may help to address the growing concern in international strategy about potential conflicts between global strategic demands and the influence of local institutions on ventures in emerging economies. Parent firms from highly developed economies may be most successful by providing strategic guidance and key sources of competitive advantage to ICVs, relying upon local parents to take a major role in high cultural content activities such as marketing or labor management, and building the autonomy of ventures at operational levels.

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great deal of room for asymmetry in the outcomes that lie within those extremes (Lorange, 1997; Lu and Lake, 1997).

REFERENCES

Amante M. 1993. Human resource management in Japanese enterprises in the Philippines: issues and problems. *Asia Pacific Journal of Management* **10**: 237–245.

Ansoff HI. 1965. *Corporate Strategy: An Analytic Approach to Business Policy for Growth and Expansion*. McGraw-Hill: New York.

Avolio B, Yammarino FJ, Bass BM. 1991. Identifying common methods variance with data collected from a single source: an unresolved sticky issue. *Journal of Management* **17**: 571–587.

Barney JB. 1986a. Strategic factor markets: expectations, luck and business strategy. *Management Science* **32**: 1231–1240.

Barney JB. 1986b. Organization culture: can it be a source of sustained competitive advantage? *Academy of Management Review* **11**: 656–665.

Barney JB. 1991. Firm resources and sustained competitive advantage. *Journal of Management* **17**: 99–120.

Beamish PW. 1988. *Multinational Joint Ventures in Developing Countries*. Routledge: New York.

Beamish PW, Killing JP. 1997a. *Cooperative Strategies: North American Perspectives*. New Lexington Press: San Francisco, CA.

Beamish PW, Killing JP. 1997b. *Cooperative Strategies: European Perspectives*. New Lexington Press: San Francisco, CA.

Beamish PW, Killing JP. 1997c. *Cooperative Strategies: Asian Pacific Perspectives*. New Lexington Press: San Francisco, CA.

Beamish PW, Morrison AJ, Rosenzweig PM, Inkpen A. 2000. *International Management*. McGraw-Hill: New York.

Blalock HM. 1985. *Conceptualization and Measurement in the Social Sciences*. Sage: Beverly Hills, CA.

Caves RE. 1971. International corporations: the industrial economics of foreign investment. *Economica* **38**: 1–27.

Chi T. 1994. Trading in strategic resources: necessary conditions, transaction cost problems, and choice of exchange structure. *Strategic Management Journal* **15**(4): 271–290.

Choi CJ, Lee SH. 1997. A knowledge-based view of cooperative interorganizational relationships. In *Cooperative Strategies: European Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 33–58.

Connor KR. 1991. An historical comparison of resource-based theory and five schools of thought within industrial-organization economics: do we have a new theory of the firm? *Journal of Management* **17**: 121–154.

Contractor F, Lorange P (eds). 1988. *Cooperative Strategies in International Business*. Lexington Books: Lexington, MA.

Dess GG, Robinson RB Jr. 1984. Measuring organizational performance in the absence of objective measures: the case of the privately-held firm and conglomerate business unit. *Strategic Management Journal* **5**(3): 265–273.

Dierickx I, Cool K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management Science* **35**: 1504–1511.

Dunning JH. 1988. The eclectic paradigm of international production: a restatement and some possible extensions. *Journal of International Business Studies* **19**: 1–32.

Falk RF, Miller NB. 1992. *A Primer for Soft Modeling*. University of Akron Press: Akron, OH.

Farahmand K, Becerra R, Green JR. 1994. ISO 9000 certification: Johnson Controls' inside story. *Industrial Engineering* **26**: 22–23.

Fladmoe-Lindquist K, Tallman S. 1994. Resource-based strategy and competitive advantage among multinationals. In *Advances in Strategic Management*, Vol. 10, Shrivastava P, Huff A, Dutton J (eds). JAI Press: Greenwich, CT; 45–72.

Fleury A. 1995. Quality and productivity in the competitive strategies of Brazilian enterprises. *World Development* **23**: 73–85.

Florin J. 1997. The case for nonequity interfirm cooperative arrangements. In *Cooperative Strategies: North American Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 3–24.

Flynn G. 1994. HR in Mexico: what you should know. *Personnel Journal* **73**: 34–44.

Fornell C (ed). 1982. *A Second Generation of Multivariate Analysis*. Praeger: New York.

Fornell C, Larcker D. 1981a. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* **18**: 39–50.

Fornell C, Larcker D. 1981b. Structural equation models with unobservable variables and measurement error: algebra and statistics. *Journal of Marketing Research* **18**: 382–388.

Geringer M. 1988. *Joint Venture Partner Selection: Strategies for Developed Countries*. Quorum: Westport, CT.

Geringer M, Hebert L. 1989. Control and performance of international joint ventures. *Journal of International Business Studies* **20**: 235–254.

Gillespie K, Teegan H. 1995. Market liberalization and international alliance formation: the Mexican paradigm. *Columbia Journal of World Business* **30**: 58–69.

Graham J, Mintu A, Rodgers W. 1994. Explorations of negotiation behaviors in ten foreign cultures using a model developed in the United States. *Management Science* **40**: 72–95.

Hagedoorn J. 1990. Organizational modes of inter-firm co-operation and technology transfer. *Technovation* **10**: 17–30.

Harrison DA, Mclaughlin ME, Coalter TM 1996. Context, cognition, and common method variance: psychometric and verbal protocol evidence. *Organizational Behavior and Human Decision Processes* **68**: 246–261.

Hennart J-F. 1982. *A Theory of the Multinational Enterprise*. University of Michigan Press: Ann Arbor: MI.

Hennart J-F. 1988. A transaction costs theory of equity joint ventures. *Strategic Management Journal* **9**(4): 361–374.

Hill CWL, Hwang P, Kim WC. 1990. An eclectic theory of the choice of international entry mode. *Strategic Management Journal* **11**(2): 117–128.

Huo YP, VonGlinow MA. 1995. On transplanting human resource practices to China: a culture-driven approach. *International Journal of Manpower* **16**: 3–15.

Hymer SH. 1960. The international operations of multinational firms: a study of direct foreign investment. PhD dissertation, Massachusetts Institute of Technology.

Johansson J, Yip G. 1994. Exploiting globalization potential: U.S. and Japanese strategies. *Strategic Management Journal* **15**(8): 579–601.

Johnson JL, Cullen JB, Sakano T, Takenouchi H. 1997. Setting the stage for trust and integration in Japanese–U.S. cooperative alliances. In *Cooperative Strategies: North American Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 227–254.

Kindleberger CP. 1969. *American Business Abroad: Six Lectures on Direct Investment*. Yale University: New Haven, CT.

Klein B, Crawford RG, Alchian A. 1978. Vertical integration, appropriable rents and the competitive contracting process. *Journal of Law and Economics* **21**: 297–325.

Kogut B. 1988. Joint ventures: theoretical and empirical perspectives. *Strategic Management Journal* **9**(4): 319–332.

Kogut B, Zander U. 1993. Knowledge of the firm and evolutionary theory of the multinational corporation. *Journal of International Business Studies* **24**: 625–645.

Lakhe RR, Mohanty RP. 1994. Total quality management: concepts, evolution, and acceptability in developing economies. *International Journal of Quality and Reliability Management* **11**: 9–33.

Lieberman MB, Montgomery DB. 1988. First-mover advantages. *Strategic Management Journal*, Summer Special Issue **9**: 41–58.

Lorange P. 1996. Interactive strategies: alliances and partnerships. *Long Range Planning* **29**: 581–584.

Lorange P. 1997. Black-box protection of your core competencies in strategic alliances. In *Cooperative Strategies: European Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 59–73.

Lu Y, Lake D. 1997. Managing international joint ventures: an institutional approach. In *Cooperative Strategies: European Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 74–99.

Madhok A, Tallman S. 1998. Resources, transactions and rents: managing value through inter-firm collaborative relationships. *Organization Science* **9**: 326–339.

Mahoney J, Pandian JR. 1992. The resource-based view within the conversation of strategic management *Strategic Management Journal* **13**(5): 368–380.

Meznar MB, Nigh D. 1995. Buffer or bridge? Environmental and organizational determinants of public affairs activities in American firms. *Academy of Management Journal* **38**: 975–996.

Miller RG. 1974. The jacknife: a review. *Biometrika* **61**: 1–15.

Minehan M. 1996. Skills shortage in Asia. *HR Magazine* **41**: 152.

Mjoen H, Tallman S. 1997. Control and performance in international joint ventures. *Organization Science* **8**: 257–274.

Mooney CZ, Duval RD. 1993. *Bootstrapping: A Nonparametric Approach to Statistical Inference*. Sage: Newbury Park, CA.

Morrison AJ, Roth K. 1992. A taxonomy of business-level strategies in global industries. *Strategic Management Journal* **13**(6): 399–418.

Napier NK, Vu VT. 1998. International human resource management in developing and transitional economy countries: a breed apart? *Human Resource Management Review* **8**: 39–77.

Nelson R, Winter C. 1982. *An Evolutionary Theory of Economic Change*. Belknap Press: Cambridge, MA.

Osborn RN, Hagedoorn J. 1997. The institutionalization and evolutionary dynamics of interorganizational alliances and networks. *Academy of Management Journal* **40**: 261–278.

Penrose E. 1959. *The Theory of the Growth of the Firm*. Blackwell: Oxford.

Podsakoff PM, Organ DW. 1986. Self-reports in organizational research: problems and prospects. *Journal of Management* **12**: 531–544.

Polanyi M. 1975. Personal knowledge. In *Meaning*, Polanyi M, Prosch H (eds). University of Chicago Press: Chicago, IL; 22–45.

Porter ME. 1980. *Competitive Strategy*. Free Press: New York.

Reich R, Mankin E. 1986. Joint ventures with Japan give away our future. *Harvard Business Review* **64**: 76–86.

Sargent J, Matthews L. 1997. Skill development and integrated manufacturing in Mexico. *World Development* **25**: 1669–1681.

Sarkan M, Cavusgil SG, Evirgen C. 1997. A commitment-trust mediated framework of international collaborative venture performance. In *Cooperative Strategies: North American Perspectives*, Beamish PW, Killing JP (eds). New Lexington Press: San Francisco, CA; 255–285.

Schaan JL, Beamish PW. 1988. Joint venture managers in LDC's. In *Cooperative Strategies in International Business*, Contractor F, Lorange P (eds). Lexington Books: Lexington, MA; 279–299.

Stopford JM, Wells LT. 1972. *Managing the Multinational Enterprise*. Basic Books: New York.

Tallman S, Fladmoe-Lindquist K, Robins J. 1997. Alliance strategies of U.S. firms in Mexico: a managerial model of resources and transactional concerns for alliance success. In *Strategic Discovery: Competing in New Arenas*, Thomas H, O'Neal D, Alvarado R (eds). Wiley: Chichester; 155–169.

Teece DJ. 1981. The market for know-how and the efficient international transfer of technology. *Annals of the American Academy of Political and Social Science* **485**: 81–96.

Teece DJ. 1983. Multinational enterprise, internal governance, and industrial organization. *American Economic Review* **75**: 233–238.

Teece DJ. 1986. Transaction costs economics and the multinational enterprise. *Journal of Economic Behavior and Organization* **7**: 21–45.

Teece DJ. 1987. Profiting from technological innovation: implications for integration, collaboration, licensing and public policy. In *The Competitive Challenge*, Teece DJ (ed). Harper & Row: New York; 185–220.

Teece DJ, Pisano G, Shuen A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* **18**(7): 509–533.

Venkatraman N, Ramanujam V. 1987. Measurement of business economic performance: an examination of method convergence. *Journal of Management* **13**: 109–122.

Vernon R. 1971. *Storm Over the Multinationals*. Basic Books: New York.

Williamson OE. 1985. *The Economic Institutions of Capitalism*. Free Press: New York.

Winter S. 1987. Knowledge and competence as strategic assets. In *The Competitive Challenge*, Teece D (ed). Harper & Row: New York; 159–181.

Wunsch G. 1988. *Causal Theory and Causal Modeling*. Leuven University: Leuven.

Yan A, Gray B. 1994. Bargaining power, management control and performance in U.S.–China joint ventures: a comparative case study. *Academy of Management Journal* **37**: 1478–1517.

Zeffane R, Rugimbana R. 1995. Management in the less-developed countries: a review of pertinent issues, challenges, and responses. *Leadership and Organization Development Journal* **16**: 26–36.

APPENDIX: OVERVIEW OF SAMPLE AND SURVEY ITEMS

Sample characteristics

U.S. parent organizations typically were medium to large-sized firms; median revenues were in the range of $10–100 million, with about a third (25) of all U.S. parent firms reporting revenues in excess of $100 million. Employment followed a similar pattern, with median employment in the 500–1000-employee category but nearly half (34) of all U.S. parent firms greater than 10,000 employees.

The ICVs were relatively long-lived, with a median age of about 9 years and an average age of more than 12 years. The distribution of age was skewed by the presence of a number of older ICVs. ICVs founded before 1980 represented more than a quarter of the sample, and a number of ventures

were more than 30 years old. The youngest ICV in the sample was about 4 years old.

About 90 percent of all ICVs (65) involved relationships in which the formal ICV structure required no renegotiation to continue. More than half (55.8% or 40) of the ICVs were characterized as partnerships and shared-equity joint ventures. U.S. parents typically were not majority equity holders in the shared-equity ventures; 39% (28) indicated that the U.S. parent was the majority equity holder, while the Mexican parent was majority owner in 57% (41) of cases. The remaining 4% (3) involved other, non-Mexican partners.

The importance of these ICVs to the U.S. parents stands out. In about three-quarters of all cases, ICVs were characterized as being in the U.S. parent's most important lines of business. U.S. parent managers also felt that it would be difficult to replace the Mexican parents. Only about 6% (4) considered it easy or relatively easy to replace the Mexican parent firm, while almost 70% (50) rated it difficult or very difficult. More than 82% (60) of respondents indicated that ICVs were expected to continue into the future for at least 5 years.

ICV managers appeared to enjoy a good deal of latitude in decision making, regardless of the ownership structure of the venture. A large majority of respondents (90.5% or 65) for both shared-equity ventures and nonshared-equity ICVs indicated that major decisions were undertaken without direct governance by parent companies. The fact that both shared-equity and nonshared-equity ICVs had considerable operating autonomy is not surprising. Research has indicated that ownership structure may not be the primary determinant of operational control or integration for established cooperative ventures (e.g., Choi and Lee, 1997; Contractor and Lorange, 1988; Mjoen and Tallman, 1997), and a number researchers have argued for broader conceptualizations of modes of cooperative venturing in which equity structure is not viewed as a central determinant of stability or performance (Hagedoorn, 1990; Johnson *et al.*, 1997; Osborn and Hagedoorn, 1997; Sarkan *et al.*, 1997; Yan and Gray, 1994).

The most general description of ICVs examined in this study would be to characterize them as quasi-firms. They enjoy varying degrees of legal autonomy from parents, but they are all organizations that have created ongoing operations that place them in the position to both use and develop resources. The use of the term 'parent firm' in this paper thus does not imply the existence of a shared-equity joint venture; the term is used broadly to designate the U.S. and Mexican participants in these cooperative strategies, regardless of whether the ICVs involve equity-sharing arrangements. This usage is employed in recognition of the roles that foreign and host country firms may play in contributing resources to ICVs and the role that ventures may play as recipients of resources and entities created for distinctive strategic purposes (Contractor and Lorange, 1988).

Survey items

Data for the independent and dependent measures in the study were collected using respondent ratings of a variety of resource contributions to cooperative ventures by the two partner firms. All data used in the analysis were based on Likert-scaled items as described below. A variety of other descriptive data with regard to parent firms and cooperative ventures also were collected; however, these data were collected for illustrative purposes and were not used in the structural model.

Foreign parent resource contributions

Data on foreign parent resource contributions were collected using items based on Schaan and Beamish (1988). The general question asked respondents: 'How important to this cooperative venture are *your firm's* contributions of each of the following types of resources?' Following Schaan and Beamish (1988), these were scored on 5-point Likert scales ranging from 'Not important' to 'Very important' with an additional category for 'Not applicable.' Reverse coding was used for selected items in order to improve validity. Items included: patents, licenses, copyrights; operating procedures and routines; brand name or reputation; management personnel and skills; specialized tooling or equipment; raw materials; technical personnel and skills.

Host-country parent resource contributions

These items also followed Schaan and Beamish (1988) and were scored on similar 5-point Likert scales. The general survey question was worded: 'How important to this cooperative venture are *your Mexican partner's* contributions of each of the following types of resources?' Items included:

brand name or reputation; distribution channels; labor; management personnel; technical personnel and skills; access to the Mexican market.

Performance

These items were based on Geringer (1988) and Geringer and Hebert (1989). The general survey question was worded: 'Please rate the performance of the cooperative venture on each of the following dimensions.' Following Geringer (1988), these questions also were scored on 5-point Likert scales ranging from 'Very low' to 'Very high' with a sixth category for 'Not applicable.' Items included: profitability; quality of goods produced; quality of services produced; sales; growth; labor productivity; management development; meeting strategic goals.