

**SHAREHOLDER WEALTH EFFECTS OF JOINT VENTURE TERMINATION:  
A TRANSACTION COST ANALYSIS**

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September 10, 1997

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The author gratefully acknowledges the comments of Tom Brush, Arnold Cooper, Kent Miller, and Dan Schendel on earlier drafts of this paper. Funding for this project was provided by Purdue University's Center for International Business Education and Research (CIBER) and the Purdue Research Foundation.

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Managing joint venture (JV) transitions can have implications for parent firm performance as JVs become important, albeit temporary, instruments of firms' corporate and international strategies. This study examines the average shareholder wealth effects of five specific types of JV termination. Empirical evidence from U.S. firms terminating domestic and international JVs reveals venture termination neither positively nor negatively influences firm value on average, and no one type of JV termination is superior to its alternatives in general. While JV termination is predominantly achieved by equity transfers between parent firms, acquiring firms do not systematically gain at the expense of selling firms or vice-versa. A transaction cost perspective is used to examine cross-sectional differences in firms' abnormal returns and identify contexts in which JV internalization and JV withdrawal enhance or destroy firm value. The results provide support for a more constructive, contingency-based perspective on JV termination.

## INTRODUCTION

As joint ventures (JVs) become increasingly important to firms' international and corporate strategies, managing JV evolution and termination will be significant organizational concerns in coming years. How JVs evolve, adapt, and terminate are relevant strategy issues as they affect organizational boundaries, corporate resource allocation and development, and potentially firm performance. At present, however, little is known about JV evolution and termination (Doz, 1996), and even less is known about how post-formation JV investment decisions affect parent firm performance.

A need thus exists to develop and test theoretical perspectives on JV evolution and termination that directly incorporate parent firm performance. International management and strategy scholars have traditionally assumed JV longevity is indicative of collaborative success and JV termination reflects failure by the venture or parent firms.<sup>1</sup> This assumption is also implicit in recent JV research using longitudinal models of JV survival.<sup>2</sup> By moving beyond these assumptions to directly examine firms' post-formation JV investment decisions and their performance consequences, JV research can ultimately determine the significance of JV evolution and appropriate managerial actions.

This paper investigates the parent firm performance implications of five specific types of JV termination. From a broader perspective, the study also responds to recent calls for research on the evolution of governance structures and the multinational firm (e.g., Dunning, 1988; Williamson, 1992, 1993). A transaction cost economics (TCE) lens is used to evaluate cross-sectional differences in parent firm performance effects of JV termination. Transaction cost theory has been one of the main paradigms used to study the multinational corporation (MNC) and has proven useful in empirically explaining the adoption of JVs over alternative modes of entering foreign markets. Use of the transaction cost benchmark therefore encourages comparative theoretical and empirical research on JV formation and termination.

Transaction cost theory would suggest firms' boundary decisions influence performance (e.g., Shelanski & Klein, 1995; Spiller, 1985), yet TCE has contributed little to understanding how JVs evolve or affect parent firm performance. This partially reflects theorists' use of selection-based logic and empirical analyses examining the connection between theoretically optimal governance structures and transactional attributes evaluated at the time of market entry.<sup>3</sup> Widespread JV instability raises the question of whether the match between the governance structure in place and transactional attributes is adequate during the venture's evolution. In principle, potential misalignments could be rectified by altering the on-going JV's governance structure or terminating the venture altogether in favor of a different governance structure. For the purposes of the present

study, the issue is whether the gains or losses firms obtain from altering a governance structure reflect post-formation transactional features and the context of exchange.

The paper begins by highlighting extant research on JV formation and JV instability. A subsequent section develops the hypotheses identifying potential sources of shareholder wealth creation and destruction from JV termination. Sections presenting the event study methodology and results follow. Empirical evidence suggests JV termination neither enhances nor impairs shareholder wealth on average, no single mode of JV termination is generally more attractive than its alternatives, and acquiring firms do not regularly gain at the expense of selling firms or vice-versa. However, just as JV termination adversely affects parent firms in some circumstances, venture termination can also be value-enhancing for parent firms in specific contexts identified by transaction cost theory. The paper concludes by discussing the implications of the results and possible avenues for future JV research.

## **LITERATURE REVIEW**

The literature on JVs and other strategic alliances has become large and fragmented during the last decade. The most substantial body of work examines the antecedents of JV formation and the unique properties of JVs relative to alternative governance choices such as acquisitions or contractual arrangements. The literature review presented below focuses on event studies of JV formation and complementary research on JV instability. The former stream on research investigates the *ex ante* performance implications of JV formation and the mechanisms of firm value creation or destruction. This stream of research is relevant for historical and comparative reasons, yet does not consider post-formation events or investment decisions. Joint venture instability research, by contrast, identifies sources of JV instability, but does not directly address the performance effects of JV instability.

### **Event Studies of Joint Venture Formation**

Early JV event studies emphasized the similarities and differences between JVs and mergers. The first study was by McConnell and Nantell (1985), who argued JVs and mergers are subject to similar formation motives. The authors found that two-day excess returns from JV formation, scaled by the firm's market value and the investment size, provided a premium of 0.23, which is comparable to premiums for mergers and tender offers.

Subsequent work sought to theoretically and empirically identify the sources of value creation. Woolridge and Snow (1990) reported JVs formed to share assets yielded higher abnormal returns than R&D

ventures and JVs formed to construct assets. Koh and Venkatraman (1991) viewed JVs in relation to the firm's product-market scope (Ansoff, 1965). They observed higher abnormal returns when the JV operated in the same industry as the parent firm and when the JV was formed between related parent firms (c.f., Balakrishnan & Koza, 1993). Madhavan and Prescott (1995) examined stock analysts' influence on market reactions to JV formation announcements. Applying information processing theory from psychology, they noted abnormal returns from JV formation were larger in industries with light or heavy information loads rather than moderate loads.

International joint venture (IJV) research is less conclusive regarding the average performance effects of venture formation. These equivocal findings may be partially due to cultural, political, and other unique challenges firms face in implementing cross-border ventures. Finnerty, Owers, and Rogers (1986) reported the average stock market reaction to IJV formation announcements was not significantly different from zero. Lee and Wyatt (1990) observed a negative average abnormal return, which they conjectured was a manifestation of agency problems. Average shareholder wealth effects from IJV formation were negative when partners were from developed and newly-industrialized nations and insignificant when partners were from less-developed countries (c.f., Chung, Koford, & Lee, 1993). Lummer and McConnell (1990) noted excess returns from IJV formation were larger when the partner was a firm instead of a government and its capital market was less highly correlated with the U.S. market.

A final group of event studies focused on individual host countries. Chen, Hu, and Shieh (1991) investigated Chinese-U.S. ventures in China and found a positive average abnormal return. Firm valuation effects from JV formation were larger for smaller investments, but were not related to experience in Far East markets and parent size. Another study found abnormal returns were larger for firms with less international involvement (Hu, Chen, & Shieh, 1992). Gupta *et al.* (1991) reported abnormal returns from JVs in China were larger for U.S. firms with small market shares, low capital intensity, and high technological intensity. Crutchley, Guo, and Hansen (1991) observed gains from forming Japanese-U.S. ventures were larger when a strong home currency at the time of market entry increases the attractiveness of foreign direct investment over exporting.

## **Joint Venture Instability**

Franko's (1971) pioneering study of JV instability examined how changes in a MNC's international strategy, as proxied by shifts in organizational structure, affected the firm's tolerance for the shared control and decision-making required by JVs. For example, firms had low JV instability rates while using an international division due to the emphasis placed on international expansion, independent subsidiary strategies, and a consultative role for the international division. Venture instability counts included three types of JV ownership changes: (1) increasing a parent firm's ownership stake above 95 percent, (2) crossing the 50-50 ownership boundary, and (3) selling or liquidating the JV. By contrast, JV instability was highest for non-diversified, centralized firms using an area-functional structure. Joint venture instability was also commonly brought about by the standardization of marketing policies or rationalization of production. Franko's (1971) research therefore established that JVs are distinctively transitional phenomena. Venture instability appears to be a function of the firm's evolving global strategy and supporting structure rather than the failure or success of individual JVs alone.

Subsequent research examined the instability of individual JVs rather than corporate level changes in venture portfolios. Berg and Friedman's (1978) exploratory study of chemical JVs in the U.S. found diverse reasons for JV termination, ranging from obsolete facilities to antitrust settlements to new investment opportunities. Killing (1983) reported that shared management JVs, ventures to which both parent firms contribute managers and over which the JV's board exerts significant influence, were more likely to "fail" (i.e., terminate or undergo reorganization) than JVs with a dominant parent firm. Beamish (1985) extended this work to the developing host country context and found even higher JV instability rates (i.e., 56-58 percent versus 45-50 percent for JVs in developing and developed host countries, respectively). Harrigan (1988) noted differences in parents' nationalities, activities, asset bases, and JV experience levels reduced JV lifespans.

Other JV research provided historical accounts of subsidiary ownership patterns and host countries' policies. Gomes-Casseres (1987) reported 26.9 percent of majority-owned IJVs established between 1900 and 1975 became wholly-owned subsidiaries by 1975. Parents contributing technology or maintaining more control over the JV through a larger equity stake were more likely to buy out the JV partner (Blodgett, 1991). Ventures operating in countries with open investment climates were more apt to undergo incremental changes in ownership by parent firms (Blodgett, 1992). Reynolds (1979) investigated U.S. firms' withdrawal from JVs in India in the late 1960s as the Indian government called for more local R&D, less foreign ownership, and greater exports by JVs. The movement toward minority JVs in the 1970s was concentrated in five LDCs with activist local ownership policies (i.e., Brazil, India, Iran, Mexico, and the Philippines) (Franko, 1989), while the

proportion of U.S. firms' minority and 50-50 affiliates decreased in most countries during the late 1970s and early 1980s due to host governments' liberalizing investment policies (Contractor, 1990). Collectively these findings indicate shifts in general subsidiary ownership patterns reflect firms' responses to changing host country policies regarding inbound foreign investment.

The most recent JV instability research has become more deductive and technical in orientation. Kogut's (1989, 1991) research examined determinants of JV termination using multivariate survival analyses of JV termination. For example, the likelihood of JV dissolution is lower when the JV conducts R&D activities in an R&D intensive industry (Kogut, 1989). Using a real options view of JVs, he later found the likelihood of JV acquisition increases with unexpected growth in industry demand (Kogut, 1991). Pennings, Barkema, and Douma (1994) used an organizational learning perspective to study the survival of firms' market entries. Unrelated, non-majority owned, and start-up projects subject to greater learning obstacles experienced reduced longevity (see also Li, 1995). A separate study reported national culture differences increased the likelihood of termination (Barkema, Bell, & Pennings, 1996). Park and Russo (1996) noted the likelihood of "failure" (i.e., JV dissolution) was higher for JVs between direct competitors and for JVs not supported by other JVs between the parent firms.

The literature review has two main implications for this study. First, a developing literature exists investigating the *ex ante* performance of JVs, and this stream of research has begun to identify the mechanisms underlying firm value creation through forming JVs. Little is known about the performance implications of post-formation events and decisions, however. Second, complementary research has identified factors destabilizing JVs, but JV instability has been defined in various ways, JV instability types have been aggregated together in theoretical and empirical work, and JV instability is commonly assumed to adversely affect parent firm performance. In fact, JV termination may be value-enhancing in specific firm, JV, and environmental contexts, and different JV instability types may have different performance implications for parent firms.

## **THEORY AND HYPOTHESES**

Transaction cost analyses of firms' boundary decisions generally examine the effects of a variety of transactional features, most importantly asset specificity (Riordan & Williamson, 1985; Williamson, 1985), on firms' governance choices. The theory contends firms making appropriate governance decisions will experience lower transaction costs and thus better performance. The selection-based reasoning suggests firms making inappropriate governance choices (i.e., selecting governance structures ill-suited to transactional attributes and

the broader exchange context) will be quickly weeded out by market mechanisms. As a consequence, empirical tests focus on the relationship between transactional features and governance choices at the time of market entry.

The hypotheses and empirical analyses that follow relax the standard selection-based approach. If firms' JV termination decisions are viewed as post-formation governance choices, then the mode of JV termination, taken together with the transactional features and exchange context at the time of JV termination, should affect firms' performance outcomes, which are explicitly considered here. In particular, this study draws on international applications of transaction cost theory (see Caves, 1996 and Shelanski & Klein, 1995 for reviews) identifying firm, JV, and environmental factors that may influence the firm's abnormal returns from JV termination.

### **Know-How Resources and Requirements**

Firms' know-how resources can affect the gains or losses from JV termination for two main reasons. First, TCE submits that the specificity of an asset is a function of the knowledge embedded in the asset. Firms with significant know-how resources therefore expand using high control governance structures to ameliorate possible hold-up problems (Klein, Crawford, & Alchian, 1978), difficulties which do not materialize in the absence of asset specificity. Given a positive theoretical relationship between asset specificity and control, the performance effects of changing a venture's ownership structure through JV internalization or JV withdrawal will therefore depend on asset specificity levels. Second, control problems can arise in the JV context when a parent firm simultaneously attempts to acquire a partner's know-how while protecting its own resources that are difficult to value (Hamel, 1991). Unlike wholly-owned subsidiaries, JVs offer less protection against know-how leakage or direct appropriation by competitors. For these reasons, R&D intensive firms tend to be vertically integrated (Levy, 1984), prefer wholly-owned subsidiaries (Fagre & Wells, 1982; Gatignon & Anderson, 1988; Stopford & Wells, 1972), and engage in less divestiture activity (Hoskisson, Johnson, & Moesel, 1994). Multinational firms with significant R&D resources tend to employ their proprietary knowledge in subsidiaries that the firm controls completely (Davidson & McFetridge, 1985; Davies, 1977; Hennart, 1982, 1989).

The above research suggests firms with substantial R&D resources to contribute to a JV have stronger incentives to internalize a JV than firms with less significant technological know-how resources. Just as R&D intensive firms tend to gain more from international acquisitions than firms with less R&D resources (Morck & Yeung, 1992), the same pattern should hold for firms gaining complete control of a jointly-owned business. As a corollary, firms with substantial R&D resources are more apt to be adversely affected by JV termination when the firm does not maintain control over the JV's activities and the firm's know-how contributions. As

Williamson observed, “asset specificity is apt either to be sacrificed and transactions moved to the market, or if asset specificity is preserved (or deepened), transactions will be moved to unified governance” (1988: 360).

**H1a: The acquiring firm’s abnormal returns from JV internalization will be positively related to the acquiring firm’s R&D intensity.**

**H1b: The withdrawing firm’s abnormal returns from JV withdrawal will be negatively related to the withdrawing firm’s R&D intensity.**

Parent firms’ intangible resources subject to transactional hazards extend beyond technological know-how to include marketing-based intangible assets (Hennart, 1991). For example, transaction-specific human capital in a JV is likely to be significant for the firm with marketing intensive products requiring more complex partner interactions (Anderson & Gatignon, 1986). Greater control over subsidiaries is also required to reduce hazards of free-riding on a parent firm’s brand name developed through cumulative marketing efforts (Hennart, 1991). Advertising intensive MNCs therefore exhibit a greater proclivity toward using wholly-owned foreign subsidiaries over alternative entry modes (Fagre & Wells, 1982; Fladmoe-Lindquist & Jacque, 1995; Stopford & Wells, 1972). Transaction cost theory thus submits that the firm’s marketing-based intangible resources affect the attractiveness of alternative ownership structures in a similar manner as the firm’s R&D resources. Hence:

**H2a: The acquiring firm’s abnormal returns from JV internalization will be positively related to the acquiring firm’s advertising intensity.**

**H2b: The withdrawing firm’s abnormal returns from JV withdrawal will be negatively related to the withdrawing firm’s advertising intensity.**

Parent firms’ resource contributions to a JV can also be inferred from the venture’s resource requirements, as proxied by the JV’s industry of operation. Previous research has found JVs are prevalent in natural resource-based manufacturing industries (e.g., Stuckey, 1983), which generally require less complex know-how contributions by parent firms. For instance, Gomes-Casseres (1989) reported U.S. MNCs’ foreign subsidiaries in natural resource-based manufacturing industries are more than twice as likely to be JVs compared to affiliates in other industries. Hennart (1991) observed a similar pattern for Japanese MNCs investing in the U.S. market. Since JVs in natural resource-based manufacturing industries involve less complex know-how contributions by parent firms, gains from acquiring complete control via JV internalization are apt to be lower than for ventures in other industry contexts. Conversely, firms withdrawing from JVs in natural resource-based manufacturing industries may sacrifice less asset specificity compared to JV withdrawals in other industries.

The following hypotheses result:

**H3a: The acquiring firm’s abnormal returns from JV internalization will be lower for JVs in natural resource-based manufacturing industries than for JVs in other manufacturing industries.**

**H3b: The withdrawing firm's abnormal returns from JV withdrawal will be higher for JVs in natural resource-based manufacturing industries than for JVs in other manufacturing industries.**

#### **Cultural Distance and International Experience**

Transaction cost theory suggests transfers of tacit knowledge from an MNC to its affiliate will be difficult and costly when the affiliate operates in a host country that is culturally distant from the MNC's home country. For instance, as cultural distance increases, transaction costs can increase because of higher communication costs resulting from encoding and decoding gaps in languages (Root, 1987). By using weaker forms of integration in culturally distant markets, the firm can reduce governance costs by passing on the responsibility for tailoring marketing and other business practices to a local firm (e.g., Anderson & Gatignon, 1986).

Empirical research on MNCs finds a negative relationship between cultural distance and subsidiary control. Kogut and Singh (1988) observed U.S. MNCs enter culturally distant markets via IJVs rather than wholly-owned subsidiaries. Similarly, Gatignon and Anderson (1988) reported U.S. firms tend to use partially-owned subsidiaries in Latin European countries after accounting for other ownership influences. In culturally distant host countries, firms also prefer licensing agreements (Davidson & McFetridge, 1985) or franchising agreements (Fladmoe-Lindquist & Jacque, 1995) over wholly-owned subsidiaries. Research on cross-border acquisitions reports gains to acquiring firms are negatively related to national culture differences (e.g., Datta & Puia, 1995).

Situated in the middle of the governance structure continuum, the JV's equilibrium is sensitive to external and internal disturbances making market- or hierarchy-based exchange more efficient (Williamson, 1991). Cultural differences and lack of trust can prompt contractual renegotiations, thereby undermining the initial basis for collaboration (Beamish & Banks, 1987). Venture longevity is therefore generally lower when the JV operates in a culturally distant home country (Barkema, Bell, & Pennings, 1996). Governance costs can also be adversely affected by cultural differences causing parent firms to falsely attribute partner behavior as opportunistic (Brown, Rugman, & Verbeke, 1989). Harrigan and Newman (1990) propose foreign JVs are more likely to be spun off rather than absorbed compared to domestic JVs because geographic and cultural distances limit the coordination benefits that internal organization would otherwise afford the firm.

**H4a: The acquiring firm's abnormal returns from JV internalization will be negatively related to the cultural distance between the U.S. and the JV's host country.**

**H4b: The withdrawing firm's abnormal returns from JV withdrawal will be positively related to the cultural distance between the U.S. and the JV's host country.**

Similarly, firms lacking international experience are apt to be unable to commit to stand-alone operations in unfamiliar markets (e.g., Johanson & Vahlne, 1977; Zaheer & Mosakowski, 1997). Relative governance costs for wholly-owned units in foreign markets can be reduced, however, as the firm gains experience in serving that particular market or other international markets. Further, the knowledge that develops from international operations has a large experiential component, so intrafirm transfers of such knowledge can take place with greater efficiency than transfers across firm boundaries. Hence, firms with experience in a particular country exhibit a preference for wholly-owned entries (e.g., Gomes-Casseres, 1989; Hennart, 1991) and give greater priority to projects in that country (Davidson, 1980). Gatignon and Anderson (1988) found that firms with more foreign market entries favor complete ownership for individual subsidiaries. Firms with less international involvement tend to gain more from establishing JVs instead (e.g., Hu, Chen, & Shieh, 1992). Other research presents less consistent results regarding the relationship between MNCs' international experience and their governance structure choices (e.g., Erramilli, 1991; Fladmoe-Lindquist, 1995; Kogut & Singh, 1988).

The development of experience in the host market or other countries can make stand-alone operation through JV internalization feasible (Beamish & Inkpen, 1995). Venture internalization may be attractive if such knowledge reduces post-acquisition integration or global coordination costs or promotes greater commitments of transaction-specific assets that the JV cannot adequately safeguard. Such benefits may be forgone by experienced firms withdrawing from international JVs to which specialized assets have been contributed.

**H5a: The acquiring firm's abnormal returns from JV internalization will be positively related to the acquiring firm's international experience.**

**H5b: The withdrawing firm's abnormal returns from JV withdrawal will be negatively related to the withdrawing firm's international experience.**

### **Political Risk**

While JV internalization can mitigate risks of knowledge appropriation or free-riding by partners, altering JV ownership can also change the firm's exposure to other risks. Just as cultural differences or inexperience in international markets may affect the attractiveness of changing host market commitments through shifting JV ownership, political risks may influence firms' performance outcomes from JV internalization or JV withdrawal.

Political risk is a multidimensional concept referring to possible effects of a host country's policy restrictiveness and political change (e.g., Fitzpatrick, 1983; Kobrin, 1982). Ownership restrictions influence the feasible set of subsidiary ownership structures, so policy shifts trigger changes in subsidiary ownership patterns

(Contractor, 1990; Franko, 1989). Other political risks involving changes in a country's political regime, operational constraints, and policies surrounding financial transfers also affect optimal ownership structures since governance forms involving progressively greater integration are more sensitive to such risks (Teece, 1986). For instance, in comparison with JVs relying on local partners, wholly-owned subsidiaries involve a direct connection between the MNC and host government. Not having a local firm to buffer the MNC from the host government increases the likelihood the committed MNC will be held-up by the host government.

Empirical research finds a negative relationship between political risk and subsidiary control (e.g., Gatignon & Anderson, 1988). Kim and Hwang (1992) reported firms prefer licensing agreements over IJVs and wholly-owned subsidiaries in high risk countries. Restrictive host government policies regarding the repatriation of dividends, fees, and royalties increase the likelihood a service firm will enter a foreign market with a franchising agreement rather than a wholly-owned direct investment (Fladmoe-Lindquist & Jacque, 1995). The host country's political context should similarly influence firms' abnormal returns from JV internalization and JV withdrawal as such ownership changes involve changes in the firm's commitment to the host market.

**H6a: The acquiring firm's abnormal returns from JV internalization will be negatively related to the host country's political risk.**

**H6b: The withdrawing firm's abnormal returns from JV withdrawal will be positively related to the host country's political risk.**

### **Multiple Parent Firm Linkages**

The previous hypotheses consider a single JV in isolation from other possible relationships between the parent firms. However, the presence of other alliances between parent firms creates the potential for spillovers across alliances. For instance, when other alliances exist, firms can channel rewards and punishments through multiple relationships to respond to cooperative and competitive behaviors. Such reciprocity creates bilateral dependence and thus promotes venture longevity (Kogut, 1989; Park & Russo, 1996). As a result, venture safeguards can be greater than features of a single JV might otherwise indicate.

The costs of JV termination therefore involve potential repercussions on other alliances with the partner. For example, if a firm divests one of two JVs with a particular partner, the JV withdrawal may destabilize the remaining JV by changing parents' incentives to continue to devote resources to the venture. The performance effect of internalizing a JV bundled with other alliances is less certain. Both parent firms may have made significant transaction-specific commitments to the venture, and these specific resources can be controlled by the firm acquiring complete ownership of the JV. However, the total shareholder wealth effect of JV

internalization may not be positive if the JV partner buyout adversely affects other relationships. Hence, the influence of on-going JVs on abnormal returns from JV internalization is not specified *a priori*.

**H7: Abnormal returns from JV withdrawal will be lower when parent firms have other on-going JVs with each other at the time of JV termination.**

## METHODOLOGY

### Sample

Joint venture termination announcements were used to construct the base sample. Searches used Predicast's Funk and Scott (F&S) Index and Lexis-Nexis' company news library to identify ventures terminating during the 1985-1995 time period. These databases draw upon more than 1,000 and 2,300 sources, respectively.

Three main criteria were applied to screen announcements. First, at least one of the JV's parent firms had to be a publicly-held, U.S. firm. Second, the JV had to be a separate entity with equity held by two or more parent firms. This criterion excluded other governance structures such as toe-hold investments and non-equity collaborations and guaranteed partners were firms rather than public, government, or anonymous investors. Third, the JV had to terminate from the vantage point of a focal U.S. firm. Announcements were eliminated if they failed to specify the means by which the venture ended or contained retrospective information.

Five types of JV termination were distinguished, which represent JV internalization or JV withdrawal from a focal firm's perspective. A focal firm internalized the JV if this parent firm bought out its partner(s) and acquired the JV. Four alternative types of venture withdrawal were coded. The focal firm can liquidate the JV's assets, sell its ownership position to the partner(s), sell its individual equity stake to an outside party, or sell the JV in its entirety to an outside party. In 69 instances more than one firm could be identified as a focal firm within a particular JV, so a single focal firm was chosen at random in order to eliminate any bias in cross-sectional analyses caused by multiple sampling on a single JV.

This procedure generated a base sample of 423 JVs operating in 33 countries and 53 industries (i.e., at the 2-digit SIC level). Approximately half of these ventures (i.e., 51.1 percent) operated within the U.S., and Japan was the second most common host country with 12.3 percent of the observations. A majority of JVs (i.e., 63.6 percent) operated in manufacturing industries (i.e., SICs in the 2000-3999 range). Chemicals and Allied Products (i.e., SIC 28) had the largest number of terminated JVs with 20.6 percent of the observations. In 83.2 percent of the cases, the focal firm either bought out its JV partner or sold its stake in the JV to its partner(s). The focal firm sold its equity to an outside party in 8.8 percent of the cases, and parents liquidated JVs 8.0

percent of the time. Hence, JV termination is predominantly achieved through JV ownership reallocations, and selling out to a partner is the most common method of JV withdrawal.

### Variables and Data Sources

**Dependent Variable.** The parent firm performance effect of JV termination was measured through event study methodology. This technique captures the parent firm's stock price movement surrounding the JV termination announcement after adjusting for general stock market movements and the firm's systematic risk. The Sharpe-Lintner market model was estimated to obtain firm-specific stock returns forecasts:

$$(1) \quad R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}.$$

$R_{it}$  is the return on security  $i$  in period  $t$ ,  $R_{mt}$  is the return on the value-weighted market portfolio, and  $\varepsilon_{it}$  is the error term assumed to be distributed  $N(0, \sigma^2)$  and independent across firms and time. Daily firm and market returns data were obtained from the Center for Research in Security Prices (CRSP) data files. A tradeoff exists between estimating equation (1) over a long interval to improve the statistical accuracy of parameters versus estimating the model over a short horizon close to the announcement date in case parameters are unstable. Hence, the chosen estimation interval was of intermediate length. The trading days used were  $t = -250$  to  $t = -50$ , where  $t = 0$  corresponds to the date of the JV termination announcement. When multiple announcements appeared for a single JV termination, the earliest trading day was used for  $t = 0$ . When the announcement date was not a trading day, the next available trading day was used. Finally, the observation was deleted if the announcement date could not be determined to the day or the firm made other information disclosures that might confound the results. For trading days surrounding the JV termination announcement date, forecasted returns from equation (1) provided the benchmark for calculating abnormal returns:

$$(2) \quad AR_{it} = R_{it} - (a_i + b_i R_{mt}),$$

where  $a_i$  and  $b_i$  are the firm-specific OLS parameter estimates from equation (1). The total firm valuation effect is measured by summing abnormal returns between two days  $t = \tau$  and  $t = \kappa$  surrounding the announcement date:

$$(3) \quad CAR_{i,\tau,\kappa} = \sum_{t=\tau}^{\kappa} AR_{it}.$$

JV event studies have accumulated abnormal returns for periods up to sixty days in length (e.g., Lee & Wyatt, 1990). However, for multivariate analyses of CARs it is desirable to use a smaller interval to reduce the amount of noise in the dependent variable while still capturing differences in price adjustment due to information leakages or delays (e.g., McWilliams & Siegel, 1997). This study used  $CAR_{i,-2,2}$  as the estimate of the firm valuation effect of JV termination.<sup>4</sup>

**Explanatory Variables.** Following previous international research employing TCE (e.g., Hennart, 1991; Hennart & Park, 1994; Morck & Yeung, 1992), the parent firm's technological and marketing know-how resources were measured by R&D and advertising outlays, respectively. R&D and advertising intensity variables were constructed using R&D expense to sales and advertising expense to sales ratios for the year prior to the JV termination announcement using Compustat data (i.e., R&D and ADV). The binary variable NATRES was coded as one if the JV operates in a natural resource-based industry (i.e., in SIC 20, 21, 22, 24, 26, 29, 30, or 33), and zero otherwise (Gomes-Casseres, 1989). The variables R&D, ADV, and NATRES were included in models when either the parent firm or JV operates in a manufacturing industry (i.e., SICs 2000-3999).

Cultural distance was measured in two ways using a weighted index of cultural distance and a categorical approach. Both techniques have been used in recent analyses of MNCs' ownership decisions and subsidiary survival (e.g., Barkema, Bell, & Pennings, 1996; Fladmoe-Lindquist & Jacque, 1995; Gatignon & Anderson, 1988). First, the weighted index, CD, uses Hofstede's (1980) scales for uncertainty avoidance, individuality, tolerance of power distance, and masculinity for the U.S. and host countries:

$$(4) \text{CD}_{jk} = \sum_{i=1}^4 [(I_{ij} - I_{ik})^2 / V_i] / 4,$$

where  $\text{CD}_{jk}$  is the cultural distance between countries  $j$  (i.e., the U.S.) and  $k$ ,  $I_{ij}$  is the score for country  $j$  on scale  $i$ ,  $I_{ik}$  is the score of country  $k$  on scale  $i$ , and  $V_i$  is the sample variance of scale  $i$  (Kogut & Singh, 1988). Second, binary variables classified JVs into national culture clusters obtained in prior empirical research (Ronen & Shenkar, 1985). Since a few clusters had zero or few JVs, and 52 of the 60 "independent" JVs were located in Japan, six binary variables were constructed to indicate whether or not the JV was based in a Far East, Germanic, Latin American, Latin European, Japanese, or another host country (i.e., FAREAST, GERMANIC, LATINAM, LATINEUR, JAPAN, and OTHER). When all six indicators are equal to zero, the JV operated in an Anglo nation.

International experience was measured using proxies for multinational and country-specific experience. Multinationality, MULT, is the number of countries in which the firm has direct investments upon JV termination (Caves & Mehra, 1986; Kogut & Singh, 1988). Prior entry, PRIOR, indicates whether or not the firm had entered the JV's host country with a direct investment prior to the JV termination (i.e., PRIOR = 1 if yes, 0 otherwise). Subsidiary data used to construct these proxies were obtained from the Directory of Corporate Affiliations.

Political risk was measured using three variables to capture political change and policy restrictions in the JV's host country: (1) political turmoil risk, TURMOIL; (2) financial transfer risk, TRANSFER; and (3) investment restriction risk, INVRST. These proxies were obtained from 18-month forecasts from the Political Risk Service for the year preceding the JV termination announcement. All three variables are reported annually in Planning Review. Financial transfer and investment risk forecasts are reported on a scale from A+ to D-, and political turmoil risk forecasts are reported on a scale ranging from "low" to "very high." Following Fladmoe-Lindquist and Jacque (1995), transfer and investment risk forecasts were converted to numerical scores on a 0-4 scale, and political turmoil forecasts were converted to numerical scores on a 1-4 scale.

A binary variable, TIES, indicated whether or not parent firms have other on-going equity JVs at the time of JV termination (Park & Russo, 1996). This variable incorporated equity JVs rather than other alliances since bilateral dependence and opportunities for reciprocity are likely to be greater for equity JVs, and the use of announcement searches may miss less significant alliances.

**Control Variables.** Four types of control variables were used in the analyses. First, host market attractiveness was included to control for expansion opportunities and the host government's bargaining power (e.g., Gomes-Casseres, 1989, 1990). Market size was measured as the host country's 1990 gross domestic product in U.S. dollars. Market growth (i.e., GDPGR) was measured as the average annual growth in real GDP for the five year period preceding the JV termination. Data were obtained from the Statistical Yearbook, the World Data database, and the Monthly Bulletin of Statistics of the Republic of China. Second, firm size was included as a control since abnormal returns for an investment decision are expected to be smaller for firms with large operations, holding all else constant (e.g., McConnell & Nantell, 1985). LASSET is the natural logarithm of the firm's total assets. Data for firm size were obtained from Compustat. Third, the firm's pre-termination equity stake, EQUITY, controlled for the parent firm's ownership change. Kogut's (1991) option model suggests acquisition gains are negatively related to the firm's pre-acquisition JV ownership. Fourth, the JV's duration in years, DURATION, was used to control for JV age (Kogut, 1988b). Data for EQUITY and DURATION were obtained from Lexis-Nexis, the F&S Index, and the Directory of Corporate Affiliations.

### **Model Specifications**

Three separate models were estimated since a subset of the explanatory variables apply to specific ventures and two techniques were used for modeling the effects of cultural distance. The following model was estimated for focal firms or JVs operating in manufacturing industries:

$$(5) \text{ CAR}_{i,2,2} = \beta_0 + \beta_1\text{R\&D} + \beta_2\text{ADV} + \beta_3\text{NATRES} + \beta_4\text{TIES} + \beta_5\text{LASSET} + \beta_6\text{EQUITY} +$$

$$\beta_7\text{DURATION} + \epsilon_i.$$

For JVs based outside the U.S., two models were used given the two approaches for measuring cultural distance:

$$(6) \text{ CAR}_{i,-2,2} = \beta_0 + \beta_1\text{CD} + \beta_2\text{MULT} + \beta_3\text{PRIOR} + \beta_4\text{TURMOIL} + \beta_5\text{TRANSFER} + \beta_6\text{INVRST} + \beta_7\text{TIES} + \beta_8\text{GDP} + \beta_9\text{GDPGR} + \beta_{10}\text{LASSET} + \beta_{11}\text{EQUITY} + \beta_{12}\text{DURATION} + \epsilon_i,$$

$$(7) \text{ CAR}_{i,-2,2} = \beta_0 + \beta_1\text{FAREAST} + \beta_2\text{GERMANIC} + \beta_3\text{LATINAM} + \beta_4\text{LATINEUR} + \beta_5\text{JAPAN} + \beta_6\text{OTHER} + \beta_7\text{MULT} + \beta_8\text{PRIOR} + \beta_9\text{TURMOIL} + \beta_{10}\text{TRANSFER} + \beta_{11}\text{INVRST} + \beta_{12}\text{TIES} + \beta_{13}\text{GDP} + \beta_{14}\text{GDPGR} + \beta_{15}\text{LASSET} + \beta_{16}\text{EQUITY} + \beta_{17}\text{DURATION} + \epsilon_i.$$

Models (6) and (7) did not restrict firms or JVs to manufacturing industries. The significance of national culture differences in equation (7) can be assessed by a hierarchical F-test (i.e.,  $H_0: \beta_1 = \dots = \beta_6 = 0$ ). Equations (5) through (7) were estimated separately for JV internalizations and JV withdrawals since parameter signs are expected to differ according to the JV termination mode.

## RESULTS

Table 1 provides descriptive statistics and a correlation matrix for the variables in equation (5). The large mean and standard deviation for R&D intensity reflects several observations with values above unity, which were deleted from the multiple regression analyses. Firms that are R&D intensive generally exercise greater control over their JVs prior to acquisition through a higher equity stake ( $p < 0.001$ ). Ventures in natural resource-based manufacturing industries tend to be owned by less R&D intensive firms (i.e.,  $t = -2.32$ , 269 d.f.). This finding conforms to the observation that parent firms use JVs in such industry contexts due to lesser know-how requirements (Gomes-Casseres, 1989). In 15.8 percent of the cases, parent firms had other on-going equity JVs at the time of venture termination. Consistent with past research reporting path dependence in JV ownership (e.g., Blodgett, 1991; Gomes-Casseres, 1987), the average pre-termination equity stake is larger for acquiring firms than withdrawing firms (i.e.,  $t = 3.99$ , 319 d.f.). The average venture duration is 9.02 years.

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Insert Table 1 Here

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Table 2 presents descriptive statistics and a correlation matrix for the variables appearing in equations (6) and (7). The average firm operates in 14.5 countries at the time of JV termination. Firms with greater international involvement tend to be larger ( $p < 0.05$ ) and have longer-lived ventures ( $p < 0.10$ ). Approximately half (i.e., 53 percent) of the firms had made a direct investment in the host country before the JV's termination. Host countries attracting such prior entries are larger (i.e.,  $t = 2.77$ , 200 d.f.) and have better political risk forecasts (i.e.,  $t = -2.94$ ,  $-2.73$ , and  $-2.30$  for TURMOIL, TRANSFER, and INVRST; 203 d.f.). Host countries

with worse political risk forecasts are those more culturally distant from the U.S. in general. The average 1990 GDP of host countries is \$1.26 trillion, and the average annual growth rate in real GDP is 3.18 percent.

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Insert Table 2 Here  
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Table 3 presents mean abnormal returns from JV internalization and JV withdrawal for trading days surrounding the announcement date. The firm valuation effect of JV termination,  $CAR_{i,-2,2}$ , averages 0.66 percent for JV internalizations and 0.36 percent for JV withdrawals. Both values are insignificant at the 0.10 level. Average abnormal returns are positive for firms selling JV equity stakes to partners (i.e., Type II, date  $t = 1$ ,  $p < 0.10$ ) or to outside parties (i.e., Type III, date  $t = 0$ ,  $p < 0.01$ ). By contrast, the mean abnormal return is negative for firms selling JVs in their entirety to outside parties (i.e., Type IV, date  $t = 1$ ,  $p < 0.10$ ), and the mean abnormal return from JV liquidation is not significantly different from zero (i.e., Type V). However, average CARs for each of the five JV termination types are not significantly different from zero at the 0.10 level. Results from a one-way analysis of variance (ANOVA) indicate average CARs do not differ across the five JV termination types (i.e.,  $F = 0.841$ ; 4, 364 d.f.). These findings reveal JV termination neither enhances nor impairs shareholder wealth on average, and no single JV termination type appears to be more attractive than its alternatives in general.

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Insert Table 3 Here  
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Domestic, two-parent JVs ending via partner buyout were further investigated to examine possible payoff differences for acquiring and selling firms within ventures. Stock returns data were available for both parent firms in 42 JVs. Consistent with the above findings, a matched-sample t-test revealed no difference in acquiring and selling firms' CARs at the 0.10 level (i.e.,  $t = -0.096$ , 41 d.f.). Hence, acquiring firms do not systematically gain at the expense of selling firms or vice-versa.

Table 4 presents regression results for model (5). A plot of studentized residuals versus predicted values provided no evidence of heteroskedasticity (Fox, 1991), which can be problematic when stock returns forecasts are used to construct a dependent variable for a second stage regression model (Stickel, 1985). Variance inflation factors (VIFs) were below two for all explanatory variables for the JV internalization and JV withdrawal models, providing no evidence of multicollinearity problems (Neter, Wasserman, & Kutner, 1990).

Finally, outliers were eliminated from the analysis when their DFFITS values exceeded  $2\sqrt{\frac{p}{n}}$  in absolute value,

where  $p$  is the number of estimated parameters and  $n$  is the sample size (Belsey, Kuh, & Welsch, 1980). Table 4 presents regression results after eliminating seven outliers from the JV internalization model and nine outliers from the JV withdrawal model. The former model displays satisfactory fit ( $p < 0.008$ ), while the latter is only significant at the 0.19 level.

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Insert Table 4 Here  
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Firms' technological know-how resources affect the firms' abnormal returns from JV termination. The focal firm's R&D intensity is positively signed in the JV internalization model ( $p < 0.05$ ) and negatively signed in the JV withdrawal model ( $p < 0.05$ ). Shareholder wealth effects of acquiring a JV and obtaining complete control over the business are therefore larger for firms with substantial R&D resources relative to firms that do not invest significantly in R&D. Conversely, CARs from JV withdrawal are negatively related to the withdrawing firm's R&D resources. These results are supportive of H1a and H1b.

However, firm valuation effects from JV termination do not exhibit the same relation with the firm's marketing-based intangible resources or the JV's know-how requirements. The parameter estimate for ADV is positively signed as anticipated in the JV internalization model, but fails to reach significance at the 0.10 level. The coefficient on ADV is positive in the JV withdrawal model ( $p < 0.10$ ), which is contrary to expectations. In both models NATRES is insignificant at the 0.10 level. Whether or not the JV operates in a natural resource-based or other manufacturing industry thus has no bearing on the shareholder wealth effects of JV termination. Hence, no empirical support is evident for the specific hypotheses contained in H2 and H3.

Spillovers across alliances affect the performance outcomes of investment decisions within a particular collaborative relationship. The coefficient on TIES is positive in the JV internalization model ( $p < 0.003$ ) and negative in the JV withdrawal model ( $p < 0.10$ ), providing support for H7. Having on-going equity JVs with the partner at the time of venture termination positively affects abnormal returns from acquiring a venture, but such supporting alliances adversely affect firm value when the parent firm withdraws from one of the JVs.

Firm size, LASSET, is the only significant control variable in the two models. The coefficient for LASSET is negative in the JV internalization model ( $p < 0.05$ ), which indicates larger firms experience smaller abnormal returns from JV partner buyouts. Shareholder wealth effects of JV termination do not appear to be influenced by the pre-termination equity allocation or venture duration, regardless of the means by which the JV terminates.

Table 5 presents multiple regression results for equations (6) and (7). Columns (1) and (2) are for JV internalizations, and columns (3) and (4) are for JV withdrawals. Columns (1) and (3) incorporate the weighted index measure of cultural distance, and columns (2) and (4) employ national culture clusters through six indicator variables. Inspecting plots of studentized residuals versus predicted values and VIFs again provided no evidence of heteroskedasticity or multicollinearity. Table 5 presents regression results after eliminating five, four, five, and three outliers from the four models using the DFFITS criterion introduced earlier. The models for JV internalization display better fit ( $p < 0.05$ ) than the models for JV withdrawal ( $p < 0.21$  and  $p < 0.29$ , respectively).

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 Insert Table 5 Here  
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Cultural differences between the focal firm's host country (i.e., the U.S.) and the JV's host country affect the firm's abnormal returns from JV internalization but not the abnormal returns from JV withdrawal, providing support for H4a but not H4b. The negative coefficient for cultural distance, CD, in column (1) ( $p < 0.10$ ) indicates CARs from JV internalization are lower when the JV operates in a host country culturally distant from the U.S. The hierarchical F-value for the national culture clusters in column (2) was significant at the 0.05 level (i.e.,  $F = 2.593$ ; 6, 50 d.f.). Negative coefficients on FAREAST and LATINEUR ( $p < 0.01$  and  $p < 0.05$ ) suggest CARs are lower when the parent firm acquires a JV in the Far East or in Latin European nations, after controlling for political risk and other host country conditions. In the JV withdrawal models, CD is insignificant and none of the cultural cluster proxies' coefficients are positive and significant at the 0.10 level.

Multinational experience, MULT, is not significant in any of the four models at the 0.10 level. The focal firm's multinational experience thus has no bearing on the performance effects of JV internalization or JV withdrawal. The parameter estimate for PRIOR is negative in columns (3) and (4), but is significant in column (4) only ( $p < 0.10$ ). Hence, firms lacking host country experience through a prior direct investment tend to obtain higher CARs from JV withdrawal than firms with such experience in the JV's host country. The negative coefficient for PRIOR in model (1) ( $p < 0.05$ ) suggests host country experience from prior direct investment entries does not benefit firms acquiring JVs. Hence, limited empirical support is evident for H5b but not H5a.

Specific dimensions of host country political risk influence the firm valuation effects of JV internalization and JV withdrawal, lending support to both H6a and H6b. Political turmoil risk, TURMOIL, is positively signed in columns (3) and (4) ( $p < 0.10$ ), indicating firms obtain higher CARs when withdrawing from JVs in host countries subject to significant political turmoil. The coefficient estimate for TURMOIL is negative

as expected in columns (1) and (2), but does not reach significance at the 0.10 level. Financial transfer risk, TRANSFER, is insignificant in all four models at the 0.10 level. Finally, investment restriction risk, INVRST, has a negative coefficient in model (2) and is insignificant in the other three models at the 0.10 level. This result indicates shareholder wealth effects of JV internalization are larger when the JV operates in a country with lower risks surrounding investment restrictions.

As earlier, the presence of on-going ventures between parent firms at the time of JV termination has a positive effect on the CARs from JV internalization (i.e.,  $p < 0.05$  for TIES in models (1) and (2)). However, TIES is insignificant at the 0.10 level in models (3) and (4) for JV withdrawal. As such, negative spillovers from JV withdrawal are not apparent for this sample of JVs operating outside of the U.S. Hence, the presence of other on-going JVs with a partner increases CARs from JV internalization, regardless if the JV is located in the U.S. or abroad. However, the presence of other on-going JVs at the time of venture termination does not adversely affect the abnormal returns from JV withdrawal as hypothesized if the terminated JV operates outside of the U.S.

The attractiveness of the host country, as proxied by its real growth in GDP, is another contextual factor affecting firms' gains or losses from JV termination. The positive coefficient for GDPGR in column (2) ( $p < 0.01$ ) indicates real growth in the host country is associated with larger CARs when the firm increases its commitment to the host country by acquiring the JV. The negative coefficient for GDPGR in column (4) ( $p < 0.05$ ) suggests firms' CARs from JV withdrawal will be lower when the firm withdraws from rapidly growing host markets as opposed to countries with lower (or negative) growth rates. By contrast, host market size, GDP, is insignificant at the 0.10 level in all four models, suggesting the size of the host country's economy has no impact on CARs from JV internalization or JV withdrawal. The pre-termination equity allocation and the venture's duration are also insignificant at the 0.10 level in all four models. Unlike the negative influence of firm size on CARs reported above, LASSET is insignificant in all four models at the 0.10 level. In column (1) JV duration is positively signed ( $p < 0.05$ ), providing tentative evidence that JV internalizations are more attractive for long-lived JVs outside the U.S.

## **DISCUSSION**

This study moves beyond common assumptions in the strategy and international management areas holding long-lived, stable JVs are in parent firms' interests, while JV termination or instability reflects failure on the part of the venture or parent firm. Event study methodology permits a direct analysis of the parent firm performance effects of five types of JV termination. The empirical evidence reveals venture termination neither

enhances nor impairs shareholder wealth in general. Further, no single type of JV termination appears to be more or less attractive than its four alternatives on average, and firms acquiring JVs do not typically gain at the expense of selling firms or vice-versa.

The firm valuation effects of JV termination depend on a number of contingencies. The fact that JV termination adversely affects firms in some settings while venture termination can actually enhance firm value in some well-defined contexts illustrates the value of taking a more constructive, contingency-based view of the phenomenon. For example, the impact of many contingencies on a firm's abnormal returns from JV termination will depend on whether the firm expands its boundary and control over the business through JV internalization or reduces its commitment to the activity through JV withdrawal. This finding also highlights the importance of disaggregating JV termination modes in theoretical and empirical research rather than treating JV instability as an undifferentiated concept.

The empirical results indicate transaction cost theory aids in identifying many factors influencing firms' abnormal returns from JV internalization and JV withdrawal. This study relaxes the selection approach used in transaction cost analyses of the multinational firm and market entry by investigating firms' post-entry investment decisions and the performance effects of these choices. Just as standard transactional attributes and the broader context of exchange affect firms' market entry decisions, these factors influence the performance implications of JV termination, depending on the way in which the venture ends. For example, abnormal returns from JV internalization are larger when the acquiring firm is R&D intensive, the acquiring firm has other on-going ventures with the partner, and the JV operates in a culturally similar host country with low investment risks. By contrast, these contingencies either negatively or insignificantly influence the firm's abnormal returns from JV withdrawal.

Since transaction cost theory has been a prominent paradigm used to study multinational firms and their market entry decisions, the results of this study can be compared to earlier findings in this body of research. For example, consistent with prior research reporting R&D intensity is positively associated with the firm's subsidiary ownership and control (e.g., Fagre & Wells, 1982; Stopford & Wells, 1972) and the gains from international acquisitions (Morck & Yeung, 1992), the parent firm's R&D intensity is positively related to abnormal returns from JV internalization and negatively related to abnormal returns from JV withdrawal.

Results for the firm's marketing-based intangible resources are more equivocal, however. Advertising intensity has no bearing on the firm valuation effects of JV internalization and, if anything, advertising intensity is positively associated with abnormal returns from JV withdrawal ( $p < 0.10$ ). The results therefore indicate the

firm's technology-based intangible resources better explain firms' performance outcomes from JV ownership changes. Hennart (1991) similarly finds advertising intensity does not discriminate the entry mode choices of Japanese firms entering the U.S. market, perhaps because cultural differences limit the usefulness of such resources in foreign markets. Morck and Yeung (1992) also report advertising intensity does not explain firms' *ex ante* gains from international expansion through acquisitions.

The venture's know-how requirements, as proxied by its industry context, also does not affect parent firms' gains or losses from JV termination. Whether or not the venture operates in a natural resource-based manufacturing industry does not influence parent firms' abnormal returns from JV ownership changes. Hence, while JVs may be appropriate governance structures in such industry contexts due to lower know-how contributions required of parent firms (Gomes-Casseres, 1989; Hennart, 1991), firms do not appear to suffer from acquiring complete control over such ventures when governance structures offering less control might suffice. Neither do firms gain from acquiring JVs in other industries demanding more complex know-how contributions by parent firms.

Prior research on JV instability reports JV buttressed by other alliances between parent firms tend to survive longer than isolated JVs (Kogut, 1989; Park & Russo, 1996). This study finds that the effects such supporting ventures have upon JV termination depend on the means by which the focal venture ends. The presence of on-going ventures upon JV withdrawal can reduce the firm's abnormal returns, though the negative spillovers associated with venture withdrawal may not exist if the venture operates in a foreign market. By contrast, abnormal returns from JV internalization tend to be higher when other on-going ventures exist between parent firms. Parent firms are likely to make transaction-specific investments to such ventures and the presence of other alliances may ease the transition process from venture to wholly-owned subsidiary since the acquiring firm can influence the selling firm through on-going relationships. Future research might investigate how multiple relationships between firms affect the content of exchange in a focal venture or how control changes in a venture affect other relationships between firms.

Consistent with past research noting cultural distance negatively influences subsidiary ownership and control (e.g., Fladmoe-Lindquist & Jacque, 1995; Gatignon & Anderson, 1988; Kogut & Singh, 1988) and gains from international acquisitions (e.g., Datta & Puia, 1995), this study finds cultural distance between the U.S. and the JV's host country negatively affects the firm's abnormal returns from the more incremental step of acquiring an international venture. Abnormal returns from acquiring control over an IJV through venture internalization are lower when the JV operates in the Far East or in Latin European countries relative to Anglo nations (after

controlling for host country political risks and other conditions). This contrasts Gatignon and Anderson's (1988) finding that U.S. MNCs' preferences are more oriented against complete subsidiary ownership in Germanic and Latin American countries. The present research also finds cultural distance has no apparent impact on the abnormal returns from JV withdrawal. None of the six indicator variables for national culture clusters takes on a significant positive sign and the weighted index measure of cultural distance measure is insignificant.

The empirical results do not provide conclusive evidence regarding the focal firm's international experience. While multinational experience has been found to promote the use of wholly-owned subsidiaries (e.g., Gatignon & Anderson, 1988), such experience has no bearing on firms' abnormal returns from JV internalization. Multinational experience also does not affect firms' abnormal returns from JV withdrawal. Prior research suggests experience in a particular host country supports complete ownership (e.g., Gomes-Casseres, 1989) and can facilitate greater market commitment through stand-alone operations (e.g., Beamish & Inkpen, 1995). However, firms with direct investments in the host country prior to JV internalization experienced lower abnormal returns from JV internalization than firms with no such local experience. The negative effect a prior entry has on the abnormal returns from JV internalization may reflect diminishing marginal returns from subsequent entries into the host country, but the dichotomous nature of the variable did not permit testing possible nonlinearities in the relationship. As hypothesized, firms lacking local experience obtained from a prior entry obtained higher abnormal returns from JV withdrawal than firms with prior direct investments in the host market.

Just as host country political risk affects firms' market entry choices, political risk in the venture's host country at the time of JV internalization or JV withdrawal influences parent firm performance. Previous research finds a negative relationship between political risk and subsidiary control. For instance, firms turn to licensing agreements over IJVs and wholly-owned subsidiaries in high risk countries (e.g., Kim & Hwang, 1992), and financial transfer risks prompt firms to use franchising agreements over direct investments (Fladmoe-Lindquist & Jacque, 1995). The present research shows firms' abnormal returns from JV internalization tend to be lower when the venture operates in a country subject to investment restriction risks, and firms' abnormal returns from JV withdrawal are larger when the host country is undergoing political turmoil. Collectively these findings illustrate the value of directly examining firms' post-entry investment decisions and the performance consequences for parent firms using the transaction cost lens.

Beyond the study's implications for JV research and transaction cost theory in general, a number of opportunities for future research and limitations are evident. First, research might examine other types of

alliances to assess the generalizability of the present findings. This study focused entirely on equity joint ventures with at least one U.S. parent firm. Second, future research might extend this study by investigating other types of alliance evolution and instability, examining how parent firms might adapt alliance governance structures without terminating the collaborative relationship. Research along these lines would also benefit from incorporating other parent firm outcomes since event study methodology is suitable for studying discrete shifts in firms' ownership positions rather than more gradual changes in control structures. This study is also limited by its use of available secondary data, an approach that helps characterize parent firms and ventures' environments, but does so at the cost of neglecting micro-level alliance features that might be more fully examined through primary data obtained from surveys or clinical studies. Finally, alternative theoretical perspectives could extend this research by identifying other contingencies influencing how alliances evolve and terminate and how these processes in turn affect parent organizations.

## ENDNOTES

<sup>1</sup> See Anderson (1990); Brown, Rugman, and Verbeke (1989); Dymsha (1988); Killing (1983); Parkhe (1991); Ring and Van de Ven (1994); and Spekman *et al.* (1996).

<sup>2</sup> Studies include Barkema, Bell, and Pennings (1996); Kogut (1988a, 1989); Li (1995); Park and Russo (1996); and Pennings, Barkema, and Douma (1994).

<sup>3</sup> See Anderson and Gatignon (1986); Agarwal and Ramaswami (1992); Gatignon and Anderson (1988); Gomes-Casseres (1989, 1990); Hennart (1991); Hennart and Park (1994); Hill, Hwang, and Kim (1992); Kim and Hwang (1992); Osborn and Baughn (1990); and Pisano (1989), among others.

<sup>4</sup> For testing whether an average abnormal return or cumulative abnormal return is different from zero, ARs or CARs require standardization. Following Patell (1976), the standardized abnormal return can be expressed as

$SAAR_{it} = \frac{AR_{it}}{s_i \sqrt{C_{it}}}$ , where  $s_i$  is an estimate of the standard deviation of the residuals during the estimation period

(i.e.,  $s_i^2 = \frac{\sum_{j=1}^{T_i} (R_{ij} - (a_i + b_i R_{mj}))^2}{(T_i - 2)}$ ,  $T_i$  being the number of data points in the estimation interval for firm

$i$ ) and  $C_{it}$  is the standard econometric adjustment for forecasts outside an estimation interval (i.e.,

$C_{it} = 1 + (1/T_i) + [(R_{mt} - R_m)^2 / \sum_{j=1}^{T_i} (R_{mj} - R_m)^2]$ , where  $R_m$  is the average market return in the estimation

interval. Using the central limit theorem, the average standardized abnormal return,  $ASAR_t$ , is asymptotically normally distributed with mean zero and variance  $1/N$ , so hypothesis testing can be performed on the statistic

$\sqrt{N} \bullet ASAR_t \sim N(0,1)$ . Similarly, the standardized cumulative abnormal return can be calculated as

$CSAR_{i,\tau,\kappa} = (1/\sqrt{d}) \sum_{t=\tau}^{\kappa} AR_{it} / (s_i \sqrt{C_{it}})$ , where  $d$  equals the number of days abnormal returns are summed (i.e.,  $d$

$= \kappa - \tau + 1$ ). The mean standardized cumulative abnormal return,  $CASAR$ , can be calculated for a sample of  $N$  firms and, under the central limit theorem, hypothesis testing can be performed on the statistic  $\sqrt{N} \bullet CASAR \sim N(0,1)$ . Standardization is also one remedial measure for heteroskedastic error terms result when CARs are used as dependent variables in regression models.

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**TABLE 1**  
**Descriptive Statistics and Correlation Matrix<sup>a</sup>**

Variable	Mean	s.d.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) CAR <sub>i-2,2</sub>	.578	5.953	---	.089	.030	-.034	.032	-.343***	-.010	-.052
(2) R&D	.095	.582	-.015	---	.267*	-.132	.042	-.278**	.383***	-.087
(3) ADV	.024	.055	-.084	.881***	---	.058	-.053	-.364***	.053	.004
(4) NATRES	.153	.360	.002	-.061	.058	---	-.121	.020	.081	.179*
(5) TIES	.158	.364	-.119	-.061	-.053	-.121	---	.324***	.012	.036
(6) LASSET	8.055	2.228	-.164*	-.340***	-.364***	.020	.324***	---	-.071	.007
(7) EQUITY	.494	.092	.032	.022	.053	.081	.012	-.071	---	-.006
(8) DURATION	9.019	8.671	.055	-.083	.004	.179*	.036	.007	-.006	---

<sup>a</sup>Means and standard deviations are for JV internalizations and JV withdrawals. Reported correlations are Pearson coefficients. Correlations above the diagonal are for JV internalizations, and correlations below the diagonal are for JV withdrawals. Cell sizes range from 68 to 116 for JV internalizations and 103 to 182 for JV withdrawals. † p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

**TABLE 2**  
**Descriptive Statistics and Correlation Matrix:**  
**International Joint Ventures<sup>b</sup>**

Variable	Mean	s.d.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) CAR <sub>i-2,2</sub>	.44	5.98	---	-.17	-.09	-.03	-.08	.07	-.09	.03	-.20 <sup>†</sup>	-.08	-.11	-.01	-.11	.15	-.13	-.07	-.27 <sup>*</sup>	-.06	-.01
(2) CD	1.60	1.10	.13	---	.40 <sup>***</sup>	-.30 <sup>**</sup>	.40 <sup>***</sup>	-.11	.50 <sup>***</sup>	.06	.18	.05	.17	.13	.27 <sup>*</sup>	-.23 <sup>*</sup>	.22 <sup>†</sup>	.47 <sup>***</sup>	.10	.04	.08
(3) FAREAST	.07	.25	-.01	.29 <sup>**</sup>	---	-.09	-.07	-.14	-.13	-.13	.11	-.08	-.03	-.10	-.04	-.08	-.28 <sup>**</sup>	.53 <sup>***</sup>	.18 <sup>†</sup>	.04	-.12
(4) GERMANIC	.06	.24	-.05	-.17 <sup>†</sup>	-.04	---	-.08	-.17	-.16	-.16	-.12	-.11	.001	-.11	-.15	-.10	.09	.02	-.13	-.05	.22 <sup>*</sup>
(5) LATINAM	.06	.23	.12	.24 <sup>*</sup>	-.05	-.04	---	-.12	-.12	-.12	-.03	-.04	.44 <sup>***</sup>	.35 <sup>***</sup>	.36 <sup>***</sup>	-.07	-.21 <sup>†</sup>	-.05	.04	-.08	.03
(6) LATINEUR	.16	.37	-.11	-.19 <sup>†</sup>	-.10	-.07	-.09	---	-.24 <sup>*</sup>	-.24 <sup>*</sup>	-.08	.10	.15	.05	-.15	-.15	-.07	-.03	-.14	-.22 <sup>*</sup>	-.19 <sup>†</sup>
(7) JAPAN	.25	.43	.02	.58 <sup>***</sup>	-.17 <sup>†</sup>	-.11	-.15	-.30 <sup>**</sup>	---	-.23 <sup>*</sup>	.18	.25 <sup>*</sup>	-.24 <sup>*</sup>	-.20 <sup>†</sup>	-.001	-.03	.58 <sup>***</sup>	.16	-.11	.18 <sup>†</sup>	.33 <sup>**</sup>
(8) OTHER	.20	.40	.08	.04	-.12	-.09	-.11	-.22 <sup>*</sup>	-.36 <sup>***</sup>	---	.02	-.29 <sup>**</sup>	.10	.40 <sup>***</sup>	.15	-.03	-.43 <sup>***</sup>	-.36 <sup>***</sup>	.26 <sup>*</sup>	.12	-.23 <sup>*</sup>
(9) MULT	14.54	11.63	-.15	.08	-.06	-.10	-.06	-.12	.18 <sup>†</sup>	.06	---	.42 <sup>***</sup>	-.12	-.03	-.12	-.10	.13	.02	.44 <sup>*</sup>	.09	.22 <sup>*</sup>
(10) PRIOR	.53	.50	-.23 <sup>*</sup>	-.24 <sup>*</sup>	-.12	.15	-.17 <sup>†</sup>	-.04	.09	-.17 <sup>†</sup>	.46 <sup>***</sup>	---	-.17	-.17	-.05	.05	.31 <sup>**</sup>	-.01	.12	-.04	.15
(11) TURMOIL	1.21	.46	.13	.17	-.11	-.08	.27 <sup>**</sup>	-.09	-.32 <sup>***</sup>	.60 <sup>***</sup>	.03	-.25 <sup>**</sup>	---	.62 <sup>***</sup>	.73 <sup>***</sup>	-.15	-.21 <sup>*</sup>	.002	.15	-.03	-.15
(12) TRANSFER	.59	.66	.07	.23 <sup>*</sup>	-.04	-.15	.27 <sup>**</sup>	-.10	-.28 <sup>**</sup>	.56 <sup>***</sup>	.09	-.24 <sup>*</sup>	.82 <sup>***</sup>	---	.53 <sup>***</sup>	-.09	-.32 <sup>**</sup>	-.37 <sup>***</sup>	.26 <sup>*</sup>	.03	-.19 <sup>†</sup>
(13) INVRST	.50	.49	.13	.26 <sup>*</sup>	-.06	-.15	.26 <sup>**</sup>	-.26 <sup>**</sup>	-.14	.50 <sup>***</sup>	-.02	-.28 <sup>**</sup>	.82 <sup>***</sup>	.81 <sup>***</sup>	---	-.01	-.04	.01	.03	.03	-.06
(14) TIES	.14	.34	-.07	-.04	.01	-.08	.01	.06	-.03	.09	.35 <sup>***</sup>	.20 <sup>*</sup>	.06	.16	.09	---	-.05	-.07	.04	.09	-.10
(15) GDP	1.26E6	1.1E6	-.01	.43 <sup>***</sup>	-.26 <sup>**</sup>	-.04	-.21 <sup>*</sup>	-.16 <sup>†</sup>	.59 <sup>***</sup>	-.46 <sup>***</sup>	.14	.11	-.38 <sup>***</sup>	-.37 <sup>**</sup>	-.21 <sup>*</sup>	-.06	---	.12	-.18 <sup>†</sup>	.12	.39 <sup>***</sup>
(16) GDPGR	3.18	2.39	.02	.33 <sup>***</sup>	.46 <sup>***</sup>	-.07	-.10	-.22 <sup>*</sup>	.12	-.04	.12	-.02	-.003	-.01	-.16	.07	.01	---	-.03	-.05	.15
(17) LASSET	8.30	2.07	-.19 <sup>†</sup>	-.11	-.02	-.10	.06	-.04	-.09	.11	.48 <sup>***</sup>	.27 <sup>**</sup>	.13	.14	.01	.37 <sup>***</sup>	-.14	.24 <sup>*</sup>	---	.15	.02
(18) EQUITY	.49	.09	.04	.02	.11	.06	-.04	-.02	.05	-.08	.06	-.03	-.09	-.02	.001	.05	.07	.08	-.01	---	-.03
(19) DURATION	10.33	9.28	.09	.08	-.14	-.07	-.06	-.14	.24 <sup>*</sup>	-.02	.19 <sup>†</sup>	.14	-.06	-.08	-.04	.08	.21 <sup>*</sup>	.06	-.09	-.05	---

<sup>b</sup>Means and standard deviations are for JV internalizations and JV withdrawals. Reported correlations are Pearson coefficients. Correlations above the diagonal are for JV internalizations, and correlations below the diagonal are for JV withdrawals. Sample sizes for the matrix elements range from 70 to 86 for JV internalizations and 99 to 109 for JV withdrawals.  
<sup>†</sup> p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

**TABLE 3**  
**Average Shareholder Wealth Effects of Joint Venture Termination<sup>c</sup>**

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Mean Abnormal Percentage Returns,  $AAR_t$  (%), for Joint Venture Termination Type:

Date (t)	I	II	III	IV	V
-5	-0.139	0.035	0.703	0.136	0.296
-4	0.057	-0.019	-0.223	0.388	0.041
-3	-0.001	0.092	-0.558	1.204	-0.139
-2	-0.311	-0.267	0.047	-0.908	0.188
-1	0.511	0.323	-0.347	0.457	0.205
0	0.434	0.177	1.384 <sup>**</sup>	-0.192	0.067
1	0.053	0.209 <sup>†</sup>	-0.393	-1.314 <sup>†</sup>	-0.023
2	-0.023	0.154	0.434	-0.063	-0.246
3	-0.082	0.077 <sup>†</sup>	0.113	-0.774 <sup>†</sup>	-0.210
4	0.419	-0.297	-0.385	0.430	-0.107
5	-0.202	0.149	-0.369	1.950	-0.295
N	139	168	14	19	29

<sup>c</sup> Significance levels are based on average standardized abnormal returns:  
<sup>†</sup>  $p < 0.10$   
<sup>\*</sup>  $p < 0.05$   
<sup>\*\*</sup>  $p < 0.01$   
<sup>\*\*\*</sup>  $p < 0.001$

Key to the Joint Venture Termination Types:

- I: Focal firm internalizes the JV.
- II: Focal firm sells its JV equity stake to its partner(s).
- III: Focal firm sells its JV equity stake to an outside party.
- IV: Focal firm and its partner(s) sell the JV to an outside party.
- V: Focal firm and its partner(s) liquidate the JV's assets.

**TABLE 4**  
**Results of Multiple Regression Analyses<sup>d</sup>**

Explanatory Variable	Joint Venture Internalizations	Joint Venture Withdrawals
Intercept	0.041 (0.040)	-0.012 (0.031)
R&D	0.306* (0.141)	-0.046* (0.022)
ADV	0.165 (0.185)	0.292† (0.169)
NATRES	-0.003 (0.012)	-0.015 (0.012)
TIES	0.049** (0.015)	-0.015† (0.009)
LASSET	-0.005* (0.002)	-0.001 (0.002)
EQUITY	-0.025 (0.069)	0.044 (0.051)
DURATION	-0.001 (0.001)	-0.001 (0.0005)
Model F-value	3.265**	1.457
R-square	0.352	0.117
N	50	85

<sup>d</sup> Standard errors appear in parentheses.  
† p < 0.10  
\* p < 0.05  
\*\* p < 0.01  
\*\*\* p < 0.001

**TABLE 5**  
**Results of Multiple Regression Analyses:**  
**International Joint Ventures<sup>e</sup>**

Explanatory Variable	Joint Venture Internalizations		Joint Venture Withdrawals	
	(1)	(2)	(3)	(4)
Intercept	.017 (.044)	.039 (.036)	-.042 (.068)	-.060 (.054)
CD	-.008 (.004) <sup>†</sup>	---	.004 (.007)	---
FAREAST	---	-.078 (.024)**	---	.028 (.030)
GERMANIC	---	-.002 (.020)	---	-.008 (.026)
LATINAM	---	-.016 (.024)	---	-.061 (.030)*
LATINEUR	---	-.032 (.016)*	---	-.016 (.017)
JAPAN	---	.047 (.042)	---	.002 (.041)
OTHER	---	-.025 (.018)	---	.014 (.022)
MULT	.0003 (.0005)	-.0003 (.0006)	-.0002 (.001)	-.0001 (.001)
PRIOR	-.028 (.011)*	-.006 (.011)	-.017 (.013)	-.022 (.012) <sup>†</sup>
TURMOIL	-.017 (.016)	-.018 (.020)	.056 (.033) <sup>†</sup>	.053 (.029) <sup>†</sup>
TRANSFER	.011 (.011)	.019 (.011)	-.017 (.018)	-.013 (.017)
INVRST	-.011 (.014)	-.035 (.018) <sup>†</sup>	-.010 (.024)	-.008 (.025)
TIES	.047 (.014)**	.027 (.015) <sup>†</sup>	-.002 (.014)	.002 (.012)
GDP	3.3E-9 (1E-8)	-2.7E-8 (2E-8)	-1.8E-9 (1E-8)	-3.5E-9 (2E-8)
GDPGR	.004 (.003)	.007 (.002)**	-.005 (.004)	-.008 (.003)*
LASSET	.0005 (.003)	.004 (.003)	-.002 (.004)	.003 (.003)
EQUITY	-.038 (.067)	-.049 (.056)	.041 (.097)	.040 (.076)
DURATION	.002 (.001)*	.0001 (.0008)	.001 (.001)	.001 (.001)
Model F-value	2.493*	2.074*	1.429	1.506
R-square	0.410	0.414	0.211	0.286
N	56	68	77	82

<sup>e</sup> Standard errors appear in parentheses.  
<sup>†</sup> p < 0.10  
\* p < 0.05  
\*\* p < 0.01  
\*\*\* p < 0.001