

Testing of the Positive-Multinational Network Hypothesis: Wealth Effects of International Joint Ventures in Emerging Markets

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This article examines announcement effects of 240 international joint ventures undertaken by firms to ascertain their impact on shareholders' wealth. The positive-multinational-network hypothesis suggests that the market reaction should be related to the option value of the venture. To test the positive-multinational-network hypothesis, first the market reaction between ventures into developed and less-developed countries are contrasted. Then, the reaction between ventures that form the basis for initial operations in a country and subsequent operations are contrasted. Results indicate that venture-specific characteristics influence announcement effects and that the positive-multinational-network hypothesis is supported (JEL G14, G31, G34).

Keywords: event studies, information and market efficiency, investment policy, joint ventures.

I. Introduction

International alliances have grown at a torrid pace in recent years and these alliances are becoming more important strategically (Serapio and Cascio [1996]; Geringer and Hebert [1991]). Therefore, it is important to ascertain whether international joint ventures (*IJVs*) are in the best interest of the firm's shareholders.

A review of the literature on the wealth effects of *IJVs* indicates that empirical investigation of this important area is sparse and the results

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are mixed (e.g., Finnerty, Owers, and Rogers [1986], Lee and Wyatt [1990], Lummer and McConnell [1990], Crutchley, Guo, and Hansen [1991], Chen, Hu, and Shieh [1991], and Chung, Koford, and Lee [1993]). Therefore, it is important to apply theories from other corporate investment decisions to attempt to explain the mixed previous results.

One explanation for the mixed results reported is the positive-multinational-network (*PMN*) hypothesis. Under the *PMN* hypothesis, venture-specific sample characteristics may drive the results. Kogut (1983) asserts that international expansion creates embedded options that can be exercised to create a globally maximizing network. The empirical work on the positive-multinational-network hypothesis by Doukas and Travlos (1988) supports Kogut's theory. Therefore, incorporating these factors into *IJV* research would be enlightening and may explain the mixed results reported in past research.

The goal of this article is to extend previous works by examining the positive-multinational-network hypothesis. Under the *PMN* hypothesis, two proxies for option value are suggested. First, the level of development of the partners' country should be inversely related to option value. This arises from the assumption that more expansion opportunities and less competition exist in less-developed countries. Secondly, initial expansions into a country should have more option value under the assumption that they may enable the firm to learn firsthand about the foreign market and future opportunities that can be undertaken. Therefore, the reactions between *IJVs* in developed and less-developed countries (*LDCs*) are contrasted. Then the reaction between initial and subsequent entry into a country is contrasted.

The remainder of the paper is organized as follows. Section II reviews relevant literature and develops the hypotheses. Section III presents details on the data and methodology employed. Empirical results and conclusions are presented in sections IV and V, respectively.

II. Background

Finance theory posits that in fulfilling their responsibility to maximize shareholders' wealth, managers should undertake only positive net present value (*NPV*) projects. Since the value of the firm is the sum of the *NPVs* of the projects it has undertaken, positive *NPV* projects

increase the value of the firm. Thus, announcements of these projects should elicit a positive stock price reaction. Therefore, under the assumption that managers attempt to maximize shareholders' wealth, the first hypothesis is

Hypothesis 1: *The announcement of an IJV should elicit a positive stock price reaction for the U.S. announcing firm.*

However, extant evidence on wealth effects of international joint ventures is mixed. Finnerty, Owers, and Rogers (1986) examine 110 international and 80 domestic *JVs* to determine their wealth effects. They find an insignificant market reaction and conclude that, on average, these are zero *NPV* projects since they do not affect shareholders' wealth.

Lee and Wyatt (1990) and Chung, Koford, and Lee (1993) report more troubling results, negative announcement effects. Lee and Wyatt (1990) examine the announcement effects of *IJVs* for 109 firms and find negative announcement-day returns for the full sample. They hypothesize that the level of economic development of the partner's country is an important factor, so they examine differential announcement effects for *IJVs* undertaken with partners in developed and less-developed countries. They find that the market reaction is negative and inversely related to the level of development. However, the sample size for less-developed countries is only $n = 11$. Chung, Koford, and Lee (1993) examine the *IJV* announcement period returns of 164 U.S. firms over the period 1969-1988 and find that, on average, the abnormal returns are negative. They divide the sample into developing and developed countries and find that both groups elicit a negative reaction, but the reaction is statistically insignificant for each group. This is clearly inconsistent with expected results given the managerial charge to increase shareholders' wealth (or firm value).

Crutchley, Guo, and Hansen (1991) and Chen, Hu, and Shieh (1991) study Japanese-U.S. *IJVs* and China-U.S. *IJVs* respectively. Both articles report positive announcement effects for the U.S. firm. These results are consistent with the findings reported by McConnell and Muscarella (1985) for increases in capital expenditures and McConnell and Nantell (1985) for domestic joint ventures. This is also consistent with managers fulfilling their fiduciary responsibility by undertaking positive *NPV* projects.

Kogut (1983) and Doukas and Travlos (1988) suggest that a U.S. firm's operational expansion into new industries and geographic regions can be beneficial since it creates options for the firm. This type of expansion would increase the firm's ability to exploit market imperfections through regulatory system arbitrage, tax arbitrage, or capital market arbitrage. Also, these expansions may partially satisfy shareholders' international diversification needs. Finally, these expansions create an opportunity to gain firsthand experience in a foreign market. This experience could create numerous future opportunities that otherwise would be unavailable. This complicates traditional capital budgeting analysis since it is essentially an embedded option. This embedded option could be valued by discounting the future *NPV* of a project to the present if the *NPV* and date of implementation of the project were known. However, as a practical matter, neither is known *a priori*.

Doukas and Travlos (1988) study international acquisitions and find that shareholders of U.S. *MNCs* benefit most when their firms expand internationally into less-developed countries for the first time. Lee and Wyatt (1990) find similar results for *IJVs*; however, the announcement effect is negative. These results are likely due to less-developed countries possessing more opportunities for further expansion than industrialized countries and exhibiting less intense competition. This could easily result in creating a first-mover advantage for the firm. Therefore, it is reasonable that the announcement effect will be more strongly positive for *IJVs* in less-developed countries than for those in industrialized countries. Formally, the second hypothesis is:

Hypothesis 2: Announcement effects of IJVs will be inversely related to the level of development of the foreign partner's country.

If embedded options result from the ability to learn about opportunities in foreign markets, it is reasonable to believe that an initial expansion would have the greatest payoff in terms of learning about the market conditions and exploitable opportunities. Therefore, the reaction should be stronger for *IJVs* that provide initial exposure in a country than for subsequent operations in that country. Formally, the third hypothesis is

Hypothesis 3: Shareholders benefit more from IJVs that create initial exposure in a country.

III. Data and Methodology

The sample consists of 240 *IJVs* undertaken since 1988. The *Wall Street Journal Index* is used to identify the *IJV* announcement and the announcement date. The sample covers only completed *IJVs* by firms listed on the NYSE or AMEX whose stock market data are available in CRSP and Standard & Poors COMPUSTAT tapes. *IJVs* in the banking industry (two digit *SIC* codes 60-67) are excluded from the sample as are announcements for firms if other firm specific events (e.g., capital expenditures, or earnings or dividend announcements) occur during the announcement period (10 days before or after the joint venture announcement).

To test the hypotheses, the full sample is stratified in several ways. First, to classify the *IJVs* into developing or developed countries, the IMF classification is employed. Secondly, the references used for grouping joint ventures into initial expansion and subsequent expansion are the *Directory of American Firms Operating in Foreign Countries* and *Moody's Industrial Manual*.

Among the 240 *IJVs*, 126 are consummated with foreign partners in industrialized countries and 114 in developing countries. In 121 cases, U.S. firms expand their operations into foreign partners' countries for the first time and, in 119 cases, they expand existing businesses in those countries.

To measure the announcement effects of *IJVs* on the returns to the U.S. firm's shareholders, the event-study methodology of Brown and Warner (1985) is employed. The abnormal return is computed as:

$$AR_{i,t} = R_{i,t} - \hat{\alpha}_i - \hat{\beta}_i R_{m,t}, \quad (1)$$

where $R_{i,t}$ is the realized return on stock i on day t , $R_{m,t}$ is the CRSP equally-weighted market return on day t , and α_i and β_i are the market model parameter estimates for stock i during the control period (event day -150 through -11). The coefficients estimated are used to compute the abnormal daily returns for the announcement period (event day -10 to $+10$) where event day $+t$ ($-t$) represents the t^{th} trading day after (before) the announcement date ($t = 0$). $AR_{i,t}$ is the abnormal return on stock i on day t , and is measured as the difference between the observed daily return and the expected daily return (as measured by the OLS market model).

The average abnormal return (AAR_t) across takeovers on day t is then

computed as

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t}, \quad (2)$$

where N is the number of joint venture announcements.

The cumulative abnormal return (CAR) between event day $T1$ and day $T2$ is calculated as

$$CAR_{T1,T2} = \sum_{T1}^{T2} AAR_t, \quad (3)$$

where $T1$ is the beginning day of the interval in the event period and $T2$ is the ending day of the interval in the event period.

The estimated values of $AARs$ and $CARs$ are tested for a statistically significant difference from zero using the standardized t-test in Brown and Warner (1985). Additionally, the nonparametric binomial-sign test is used to test whether the number of positive event-day returns is greater than expected.

Finally, cross-sectional regression analysis is used to more closely examine the effects of factors that are theoretically important (equation 4). In separate regressions, both announcement-day $AARs$ and two-day $CARs$ $(-1,0)$ are used as the dependent variables.

$$AAR_t = \alpha + \beta_1 DEV + \beta_2 EXP + \varepsilon. \quad (4)$$

The explanatory variables used are a dummy variable which equals one if the host country is classified as a developing country and zero otherwise (DEV), and another dummy variable which equals one if the firm has prior operational experience in the host country and zero otherwise (EXP). The β coefficients are generated by the model and show the amount of the abnormal return associated with the factor.

IV. Empirical Results

Table 1 presents the announcement effects of international joint ventures on common stock returns. Since the announcement-day $AARs$ ($t = 0$) are positive and significant at the .01 level, results indicate that, on average, shareholders benefit from the announcement of international

TABLE 1. Announcement Effects for U.S. Firms

Event Day	AARs	<i>t</i> -value	<i>p</i> -value	CARs	%positive
-5	.0449	.55	.291	.0449	52
-4	.0549	.02	.493	.0998	52
-3	-.0856	-.45	.328	-.0307	48
-2	.0482	1.07	.143	-.0374	53
-1	-.0172	-.52	.303	.0310	50
0	.3972	2.70	.004***	.3800	59
+1	-.1297	-1.06	.145	.2675	44
+2	.1759	1.33	.093*	.0462	51
+3	.0822	.56	.287	.2581	48
+4	.0688	.30	.381	.1510	51
+5	-.0997	-.36	.361	-.0309	48

Note: The statistics in this table are based on a sample of 240 international joint ventures by U.S. firms. The event date variable $t = 0, \pm 1, \dots, \pm 5$, where $t = 0$ represents the announcement day. Negative numbers are for the number of days prior to the announcement and positive numbers are for the number of days after the announcement. AAR is the average abnormal (percentage) return, and *t*-value and *p*-value are for testing the null hypothesis that the AAR is equal to zero. CAR is for the two-day cumulative abnormal (percentage) return, and %positive is the percentage of joint ventures with positive abnormal returns. *, **, *** denotes statistical significance at the 10%, 5%, and 1% level, respectively.

joint ventures for this sample. This supports the view that managers are acting in the best interest of shareholders and attempting to discover profitable opportunities. Therefore, these findings are consistent with the findings reported by McConnell and Muscarella (1985) for increases in capital expenditures and McConnell and Nantell (1985) for domestic joint ventures. However, abnormal gains from news are relatively small (on average about .4% on the announcement date). These results are consistent with the findings of Lummer and McConnell (1990), Crutchley, Guo, and Hansen (1991), and Chen, Hu, and Shieh (1991). However, these findings are contrary to the finding of no significant reaction by Finnerty, Owers, and Rogers (1986) and to the negative significant reaction reported by Lee and Wyatt (1990), and Chung, Koford, and Lee (1993). One explanation for differential announcement effects is that differences in sample composition exist in terms of embedded options under the positive-multinational-network hypothesis. Therefore, testing of the other hypotheses must be conducted.

The announcement effects for 240 international joint venture announcements by U.S. firms are presented below for five days before

TABLE 2. Announcement Effects by Level of Development

Event Day	AAR	<i>t</i> -value	<i>p</i> -value	CAR	%positive
A. When Partners are from Industrialized Countries (<i>N</i> = 126)					
-5	.1848	1.26	.106	.1848	57
-4	.0799	.27	.393	.2647	52
-3	-.1827	-.54	.294	-.1028	47
-2	.1210	.96	.169	-.0617	52
-1	-.0278	-.25	.401	.0932	52
0	.2858	1.06	.145	.2580	56
+1	-.3074	-1.91	.029**	-.0216	41
+2	.1747	.80	.212	-.1327	49
+3	.1274	.41	.341	.3021	47
+4	.1219	.29	.388	.2493	51
+5	-.0712	-.09	.463	.0507	46
B. When Partners are from Developing Countries (<i>N</i> = 114)					
-5	-.1098	-.52	.300	-.1098	46
-4	.0273	.26	.396	-.0825	52
-3	.0216	.08	.470	.0489	49
-2	-.0324	-.54	.295	-.0108	54
-1	-.0054	.49	.313	-.0378	48
0	.5204	2.79	.003***	.5150	63
+1	.0666	.47	.318	.5870	47
+2	.1773	1.09	.139	.2439	54
+3	.0323	.39	.350	.2096	49
+4	.0101	.14	.445	.0424	52
+5	-.1311	-.42	.337	-.1210	49

Note: The statistics in this table are based on a sample of 240 international joint ventures by U.S. firms. Panel A presents the results for 126 joint ventures where the partners are from industrialized countries and panel B presents the results for 114 international joint ventures where the partners are from less-developed countries. *AAR* is the average abnormal return, and *t*-value and *p*-value are for testing the null hypothesis that the *AAR* is equal to zero. *CAR* is for the two-day cumulative abnormal return, and %positive is the percentage of joint ventures with positive abnormal returns. *N* is the sample size. *, **, *** denotes statistical significance at the 10%, 5%, and 1% level, respectively.

and five days after the announcement. Column one presents the event days where $t = 0$ is the announcement day and $-t$ ($+t$) is the t^{th} day before (after) the announcement. Column two presents the average abnormal return (*AAR*) in percent and column three presents the *t* statistic and *p* value to test the hypothesis that the *AAR* is different from zero. Column four presents the two-day cumulative abnormal return

TABLE 3. Announcement Effects by Operating Exposure

Event Day	AAR	<i>t</i> -value	<i>p</i> -value	CAR	%positive
A. Initial Operational Exposure in the Host Country <i>N</i> = 121					
-5	-.0651	-.17	.432	-.0651	49
-4	.0435	.30	.383	-.0216	50
-3	-.0174	-.06	.475	-.0261	47
-2	.0763	.96	.168	.0589	54
-1	-.2309	-1.79	.037**	-.1546	45
0	.4804	2.46	.007***	.2495	60
+1	-.1692	-.65	.257	.3112	43
+2	.3381	1.76	.041**	.1689	56
+3	.0729	.90	.184	.4110	48
+4	.0358	.16	.435	.1087	52
+5	-.1248	-.12	.452	-.0890	49
B. Subsequent Operations in the Host Country <i>N</i> = 119					
-5	.1254	.71	.239	.1254	54
-4	.0678	.35	.365	.1932	54
-3	-.1548	-.70	.242	-.0870	49
-2	.0346	.66	.256	-.1202	52
-1	.1904	1.01	.157	.2250	55
0	.3070	1.31	.096*	.4974	59
+1	-.1088	-.98	.164	.1982	45
+2	.0385	.32	.374	-.0703	47
+3	.0871	-.15	.442	.1256	48
+4	.0668	.34	.369	.1539	50
+5	-.0320	-.07	.472	.0348	47

Note: The statistics are based on a sample of 240 international joint venture by U.S. firms. Panel A presents the results for 121 international joint ventures which create initial exposure in the partner's country and panel B presents the results for 119 international joint ventures which create subsequent exposure in the partner's country. *AAR* is the average abnormal return, and *t*-value and *p*-value are for testing the null hypothesis that the *AAR* is equal to zero. *CAR* is for the two-day cumulative abnormal return, and %positive is the percentage of joint ventures with positive abnormal returns. *N* is the sample size. *, **, ***denotes statistical significance at the 10%, 5%, and 1% level, respectively.

(*CAR*) in percent. The percentage of joint ventures with positive abnormal returns is presented in column five.

Table 2 presents announcement effect results for joint ventures in both developing and industrialized countries to ascertain whether the positive-multinational-network hypothesis can explain differential market reaction. Panel A shows that *IJVs* with foreign partners from

industrialized countries did not elicit significant market reaction on the announcement day ($t = 0$) and elicits a negative *AAR* of .31% on day $t+1$ that is significant at the .05 level. This result can be interpreted as the market having a dim view of expanding in industrialized countries and is consistent with the results of Lee and Wyatt (1990) and Chung, Koford, and Lee (1993). However, as panel B shows, the market reaction is strongly positive ($AAR = .52\%$), and statistically significant at the .01 level for *IJVs* with firms from developing countries. These results are consistent with Kogut (1983) and Doukas and Travlos's (1988) multinational-network-hypothesis. However, these results are inconsistent with the negative market reaction reported by Chung, Koford, and Lee (1993).

The announcement effects for 240 international joint venture announcements by U.S. firms are presented below for five days before and five days after the announcement. Panel A presents the results for 126 international joint ventures where the partners are from industrialized countries and panel B presents the results for 114 international joint ventures where the partners are from less-developed countries. Column one presents the event days where $t = 0$ is the announcement day and $-t$ ($+t$) is the t^{th} day before (after) the announcement. Column two presents the average abnormal return (*AAR*) in percent and column three presents the *t* statistic and *p* value to test the hypothesis that the *AAR* is different from zero. Column four presents the two-day cumulative abnormal return (*CAR*) in percent. The percentage of joint ventures with positive abnormal returns are presented in column five.

To further test the multinational-network hypothesis, the announcement effect results for joint ventures for both initial and subsequent expansion into the host country must be examined. Table 3, panel A shows that *IJVs* creating initial exposure in a country are viewed favorably and elicit announcement-day ($t = 0$) *AARs* of .48% that are significant at the .01 level. Two-day *CARs* are insignificant. Interestingly, initial expansions also elicit changing signs during the announcement period. One plausible explanation is that the market had some initial reservations about the expansion. This would be consistent with the views that there are both benefits and risks associated with international business, particularly in unfamiliar countries.

Panel B shows that *IJVs* creating subsequent exposure in a country are not highly prized by the market. While announcement-day ($t = 0$)

TABLE 4. Univariate Test of Mean Difference in AARs and Two-Day CARs

Sub-Samples	AAR			CAR		
	Mean	St. Dev.	<i>t</i> -value	Mean	St. Dev.	<i>t</i> -value
Industrialized	.2858	1.5876	-1.13	.2580	2.6343	-.79
Developing	.5204	1.7330		.5150	2.4041	
Initial Exposure	.4804	1.8372	.95	.2495	2.4683	-.76
Subsequent Exposure	.3070	1.4570		.4974	2.5858	

Note: AAR is the average abnormal return on the announcement day. CAR is the two-day cumulative abnormal returns. *t*-values are for testing the difference in the means in each sub-sample. *, **, *** denotes statistical significance at the 10%, 5%, and 1% level, respectively.

AARs are positive (.31%), they are only marginally significant. Two-day CARs are also positive (.5%) and insignificant. However, the reaction is confined to the announcement date, suggesting that there is less ambiguity about the benefits of the venture. Again, this is supportive of Kogut (1983) and Doukas and Travlos's (1988) multinational-network-hypothesis.

The announcement effects for 240 international joint venture announcements by U.S. firms are presented below for five days before and five days after the announcement. Panel A presents the results for 121 international joint ventures which create initial exposure in the partner's country and panel B presents the results for 119 international joint ventures which create subsequent exposure in the partner's country. Column one presents the event days where $t = 0$ is the announcement day and $-t$ ($+t$) is the t^{th} day before (after) the announcement. Column two presents the average abnormal return (AAR) in percent and column three presents the *t* statistic and *p* value to test the hypothesis that the AAR is different from zero. Column four presents the two-day cumulative abnormal return (CAR) in percent. The percentage of joint ventures with positive abnormal returns is presented in column five.

The above results lend support to the contention that firms entering developing countries and firms entering new markets elicit a stronger reaction than their counterparts (assuming all else is constant). However, they fail to test directly whether differences between the groups are statistically significant.

Table 4 presents the *t* test statistics on the mean differences in the

announcement-day ($t = 0$) *AARs* and two-day *CARs* between various sample pairs. Previous discussions of the event study results concentrate on the market reaction for a given group such as expansion into developing countries. While helpful in determining whether these factors may explain conflicting previous results, it falls short of testing the hypothesis that differences exist between the sample pairs.

Sample pair (1) tests whether shareholders benefit more from *IJVs* in developing countries. Neither the announcement-day ($t = 0$) *AARs* nor the two-day cumulative abnormal returns (*CARs* $(-1,0)$) are significant between the two groups. Therefore, while table 2 suggests that *IJV* announcements for ventures in developing countries elicit greater market reaction, the difference between the reactions for industrialized and less-developed countries are not statistically significant.

The final test further examines the multinational-network hypothesis by testing whether shareholders benefit more from *IJVs* that create initial exposure in a country. Neither the announcement-day ($t = 0$) *AARs* nor the two-day cumulative abnormal returns (*CARs* $(-1,0)$) are significantly different between the two groups. Therefore, results indicate that there is no difference in announcement effects between *IJV* that creates initial or subsequent exposure in a country. Again, despite evidence supporting the multinational network hypothesis in table 3, there is no difference between the two groups statistically.

The results of Univariate t tests between selected sample pairs are presented below to ascertain whether the observed differences in response are statistically significant. Column one provides the sample pairs. Columns two, three, and four present the average abnormal returns, on announcement day, the standard deviation of those average abnormal returns and the t -statistic for the hypothesis that the average abnormal returns are significantly different, respectively. Columns five, six and seven present the average cumulative returns on announcement day, the standard deviation of those cumulative abnormal returns, and the t -statistic for the hypothesis that the cumulative abnormal returns are significantly different.

Another approach to examining the effect of joint venture characteristic variables on the announcement-day ($t = 0$) *AARs* or two-day *CARs* $(-1,0)$ is by regressing the abnormal returns on the characteristic variables. This allows determination of the average change in abnormal returns for changes in potentially important

TABLE 5. Regression Results of Joint Venture Characteristic Variables

α	<i>DEV</i>	<i>EXP</i>	<i>N</i>
.0030 (1.90)*	.0020 (1.13)	.0020 (.95)	240

Note: The regression model estimated is $AAR_t = \alpha + \beta_1 DEV + \beta_2 EXP + \varepsilon$, where *DEV* is a dummy variable taking the value of one for developing countries and the value of zero otherwise and *EXP* is a dummy variable taking the value of one for initial operations in a country and the value of zero otherwise. The model examines the impact of the level of development of the partners' country and the U.S. firms' prior exposure in that country on the average abnormal returns. *N* is the sample size. *, **, *** denotes statistical significance at the 10%, 5%, and 1% level, respectively. Parentheses include the *t*-value for the estimates.

characteristic variables.

Table 5 provides the results of cross-sectional regression analysis between joint venture characteristic variables and *AARs* on the announcement date. *DEV* is a dummy variable representing the degree of development of the host country and takes on a value of one for developing countries and zero otherwise. A positive significant coefficient would support the contention that the development of the partner's country is an important factor. However, the results suggest that the level of development of the foreign partner's country is an unimportant factor in explaining market reaction on the announcement date. Thus, it does not support the multinational-network hypothesis of Doukas and Travlos (1988). *EXP* is a dummy variable that takes on a value of one for initial operations in a country and zero otherwise. If experience is an important factor, the coefficient should be positive and significant. As shown, the coefficient on *EXP* is positive but it is statistically insignificant. Therefore it offers no support for the multinational-network hypothesis of Doukas and Travlos (1988). This is also contrary to the results reported by Barkema et al. (1997) for Dutch firms.

The results of regression analysis are presented below. The regression model examines the impact of the level of development of the partners' country and the U.S. firms' prior exposure in that country on the average abnormal returns. The model tested is

$$AAR_t = a + B_1 DEV + B_2 EXP + \varepsilon,$$

where *DEV* is a dummy variable representing the degree of development

of the host country. It takes on a value of one for developing countries and zero otherwise. *EXP* is a dummy variable representing the firm's prior operational exposure in the host country. It takes on a value of 1 for initial operations in a country and 0 otherwise.

We also perform cross-sectional regression analysis of two-day cumulative abnormal announcement returns ($CARs(-1,0)$) on joint venture characteristic variables since, on occasion, the reaction was not confined to the announcement day. Those results are not reported here since they are substantially similar to those in table 5.

V. Conclusion

The announcement effect of U.S. firms' *IJVs* is examined to ascertain whether *IJVs* elicit a response similar to that of other important firm announcements. Theory suggests that differential wealth effects for individual firms would be driven by factors related to the positive-multinational-network hypothesis. The positive-multinational-network hypothesis asserts that international expansion creates embedded options that can be exercised to create a globally maximizing network. Two proxies for option value are suggested in the literature, the level of development of the partners' country and whether the expansion is an initial expansion or subsequent expansion. Therefore, the reactions between *IJVs* in developed and less-developed countries (*LDCs*) are contrasted and then the reactions between initial and subsequent entry into a country are contrasted.

Empirical findings suggest that, on average, shareholders experience small but significantly positive returns (.4%) on the joint venture announcement date. This result is consistent with the positive reaction reported by Lummer and McConnell (1990), Crutchley, Guo, and Hansen (1991) and Chen, Hu, and Shieh (1991) in their *IJV* studies. As hypothesized, findings suggest that significantly positive market reaction takes place when U.S. firms announce joint ventures in less-developed countries, but there are insignificant market responses to joint ventures in industrialized countries. This supports the theory of Kogut (1983) and acquisition study results reported by Doukas and Travlos (1988). Also, differences in the reaction between initial and subsequent expansions are found. These findings suggest that the market is comfortable with expanding into known territory. However, great uncertainty surrounds expansions into uncharted waters.

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