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Jean L. Johnson

Washington State University, Pullman, WA, johnsonjl@wsu.edu

Ravipreet S. Sohi

University of Nebraska-Lincoln, ravisohi@unl.edu

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The development of interfirm partnering competence: Platforms for learning, learning activities, and consequences of learning

Jean L. Johnson, Washington State University

Ravipreet S. Sohi, University of Nebraska–Lincoln

Corresponding author – J. L. Johnson, Department of Marketing, Washington State University,
Pullman, WA 99164-4730, USA; tel 509 335-1877, fax 509 335-3865, email johnsonjl@wsu.edu

Abstract

This study investigated factors within the firm that encourage organizational learning activities. The authors suggest that when the appropriate factors are present, the firm will more likely engage in learning activities integral in the development of interfirm partnering competence. The conditions for building partnering competence are found in the firm's culture and climate in the form of learning intent, receptivity, and transparency. In addition, the authors suggested that learning-related activities would generate some positive influence on specific interfirm relationships (IFRs). The authors tested these ideas on data from a multiindustry mail survey. Results largely conformed to expectations. The platform variables, for the most part, enhanced learning activities in building partnering competence. In turn, learning activities focused on partnering competence led to more effective and efficient IFRs and greater commitment in the relationship.

Keywords: Interfirm relationships, Partnering competence, Learning, Platforms

1. Introduction

Close, trusting, and high-quality interfirm buyer-seller relationships can be leveraged to gain competitive advantage. Indeed, such high-quality interfirm relationships (IFRs) can be considered strategic assets in a very real sense (e.g., Achrol, 1991; Day, 1994; Johnson, 1999; Larson, 1992). Scholars have suggested that the ability (or capability) to build and maintain high-quality and productive IFRs develops when firms engage in building knowledge bases that pertain to IFR partnering (Day, 1994). Through organizational learning, the firm can develop a competence for effective and successful partnering in IFRs.

However, scholars have long acknowledged that learning in firms does not happen serendipitously nor randomly. The surrounding conditions contribute to and support learning in the firm. In strategic alliances, for example, Hamel (1991) suggested that conditions within the partner firms and the relationship itself provide the platform for learning with regard to technology transfer or acquisition of other knowledge.

In spite of the importance of capabilities development through learning, and despite a growing literature on learning (e.g., Mooreman and Miner, 1997; Sinkula,

1994; Slater and Narver, 1995), few, if any, studies have addressed empirically the conditions within the firm that contribute to, or provide the platform for learning.

To address this important gap in our understanding, we investigate how the firm provides conditions that contribute to the development of interfirm partnering competence, a potentially critical strategic capability. Specifically, we explore how factors such as the firm's learning intent, its receptivity, and its transparency or interfunctional permeability, play a role in the development of interfirm partnering competence by providing a strong platform for learning activities. Though the foundations and backbone of partnering competence lies in the firm's learning or knowledge acquisition, direct observation of learning itself is difficult and extremely problematic. Thus, we explore the development of partnering competence through observable activities that scholars consider integral to capabilities development (Day, 1994; Slater and Narver, 1995). These learning-related activities include dissemination and joint interpretation of information relevant to IFR making and management. In this paper, we argue and test the notion that the development of interfirm partnering competence hinges largely on whether or not the firm provides the appropriate platform for the activities that essentially

embody the learning processes involved in building IFR partnering competence.

The building of a capability such as interfirm partnering competence should result in benefits and positive outcomes (Argyris, 1994; Teece et al., 1997). To extend our exploration further and to verify that interfirm partnering competence built through the learning-related activities of information dissemination and shared interpretation generates positive outcomes, we examine their effects on the firm's IFRs. We investigate the idea that, because they are integral in developing IFR partnering competence, dissemination of IFR partnering related information and shared interpretation of this information should generate more effective and efficient IFRs and an increased commitment in IFRs.

The following section of the paper develops the theoretical underpinning of the concepts involved in the platform for learning and the learning activities we consider. We use this background as a basis for the formulation of hypotheses regarding the effects of the platform variables on learning activities, and, in turn, for the effects of learning activities on relationship outcomes. In later sections, we describe a multiindustry mail survey in which data were collected. We describe the OLS regression procedures used to test the hypotheses and the findings that resulted. The paper concludes with a discussion of the implications.

2. Background and hypotheses

The topic of organizational learning occupies a position of importance in the marketing, management, and strategy literatures (e.g., Argyris and Schon, 1978; Levinthal and March, 1993; March, 1991; Sinkula, 1994; Slater and Narver, 1995). Sinkula (1994) explored learning as related to the conduct and use of market research and the use of market-based information. In a broader-based treatment, Slater (1994) and Slater and Narver (1995) addressed organizational learning and firm culture and climate in conjunction with marketing orientation and competitive advantage. Here, we draw on Slater and Narver's conceptualization (see also Fiol and Lyles, 1985) to address the issues of how firms learn and develop interfirm partnering competence, and about the precursors and outcomes of the learning-related processes. In the context of marketing-oriented IFRs, we propose that the development of interfirm partnering competence involves the active generation and development of knowledge stores related to partnering in marketing IFRs, for retrieval and application in managing current relationships and/or making future relationships.

Slater and Narver (1995) proposed a processual model of learning that involves information acquisition, information dissemination, and shared interpretation of information. As a complement to other studies, which take an organizational memory perspective to learning (Mooreman and Miner, 1997; Walsh and Ungson, 1991), and consistent with Slater and Narver (1994), we focus on the presence of important activities that comprise the process of learning in

the development of interfirm partnering competence. We suggest that with regard to partnering competence, these learning activities include the dissemination of information relevant to IFRs and shared interpretation of that information. We do not claim to test the model proposed by Slater and Narver. The learning process is complex and iterative with multiple causal directions, which would be difficult if not impossible to specify and defend. In addition, any resulting empirical model would be implausible. Instead, we take the position that the presence of important learning-related activities indicates that learning is occurring. We do not include information acquisition because, in contrast to some contexts such as market research or technology development, information relevant to interfirm partnering exists as a natural course of events. It is inherent and omnipresent in the context itself.

With regard to the development of capabilities such as interfirm partnering competence, Slater and Narver (1995) suggested that dissemination and shared interpretation are important factors that distinguish organizational learning from individual learning. This is consistent with other accepted conceptualizations of organizational learning. For example, Cohen and Levinthal (1990) contended that within the firm, individual participants share perceptions and jointly interpret information, events, and experiences. At some point, learning transcends the individual participants and assumes meaning for the firm (Grant, 1996). Organizational learning is the amplification and articulation of individual knowledge at the firm level so that it is internalized into the firm's knowledge base (e.g., Nonaka, 1994). For example, in the learning processes that essentially comprise the development of interfirm partnering competence, the amplification is accomplished through the dissemination and shared interpretation of information specifically pertaining to the firm's interface with other firms.

Dissemination of information means that information is shared and passed around the firm to the relevant managers and relevant functional areas. Effective dissemination means that the information can be seen in multiple and broadened contexts within the firm (Slater and Narver, 1995). With regard to the development of interfirm partnering competence, dissemination suggests that boundary-spanning managers share information and constantly pass around observations regarding IFR dynamics and events. There is a constant reporting on the happenings in the IFRs in which the managers are involved.

Shared interpretation of information means that there is consensus about the meaning of the information. In addition, through the shared interpretation, managers derive some sense of the implications for the firm (Slater and Narver, 1995). In the development of interfirm partnering competence, having shared information and observations of IFR dynamics and developments, boundary-spanning managers attempt to make sense of the material. They synthesize and integrate it into a meaningful framework that is useful in developing and managing IFRs in the future.

2.1. The firm's learning platform and developing interfirm partnering competence

Dissemination and shared interpretation of information, the activities that are integral in the development of interfirm partnering competence, or any other organizational learning do not happen automatically (Badaracco, 1991; Hamel, 1991; Slater and Narver, 1995). Slater and Narver (1995) propose that learning processes depend on factors in the firm's culture (entrepreneurship, market orientation), and climate (organic structure, facilitative leadership, decentralized strategic planning). With the same underlying reasoning, Hamel (1991) suggested that learning between firms in strategic alliances depends on factors that can be considered as components of the climate or culture in the firms and in the alliance relationship. These components include learning intent, receptivity, and transparency. We contend that these same components in the firm's climate or culture will initiate and perpetuate learning processes that underpin interfirm partnering competence. Here, however, the learning platform focuses on a specific domain of learning that involves the development of interfirm partnering competence. In this case, learning activities pertinent to that specific domain are encouraged and perpetuated. For example, the information that is disseminated and jointly interpreted by the boundary spanning managers involves the firm's activities, behaviors, and programs in the IFR, along with partner responses and behaviors. Figure 1 illustrates the conceptual framework of our hypotheses.

Intent, the first component comprising the learning platform, is the organizational counterpart of the motivation. Learning intent entails the firm's goal directed arousal with regard to learning (MacInnis et al., 1991). Its enthusiasm for and interest in the internalization of knowledge into the firm's knowledge stocks rather than mere observation and noting (Hamel, 1991). Learning intent is the firm's desire to learn. It describes how hungry and ambitious the firm is to learn and build competencies. When a firm's learning intent focuses on the building of a particular competence such as interfirm partnering, the firm will be insatiate

and energetic in learning activities pertinent to that competence. Strong learning intent implies that the firm is willing to allocate processing resources accordingly, thus:

Hypothesis 1: Learning intent results in greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management.

Transparency, the second major component of the firm's learning platform, concerns the opportunity to learn. It reflects the openness of the firm to learning. Between firms in strategic alliances, Hamel (1991) suggested that transparency involves the penetrability of the partner firms. That is, how closed or open the firms were in their interface. It involves the views with regard to sharing versus protectiveness and defensiveness in the relationship dynamic. When one or both firms are protective and defensive with regard to the partner, they are less penetrable and less learning activities take place. Here, we suggest that transparency is a factor for learning activities within the firm, albeit in a slightly different form.

Within the firm, transparency involves the interface between functional areas, between levels of management, and also between other relevant work groups such as the teams that work together in boundary spanning activities. When the interface between and across such groups is thick, i.e., when it involves frequent, meaningful, dialogue, and interaction, there is a great opportunity for collective learning and competence building. When these groups are impenetrable, that is, group members feel a sense of protectiveness and isolation, the interface with others is weak. Group members do not feel that they are able to talk and interact freely with other members of other groups, limiting the opportunity for learning. Therefore, we hypothesize the following:

Hypothesis 2: Transparency results in greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management.

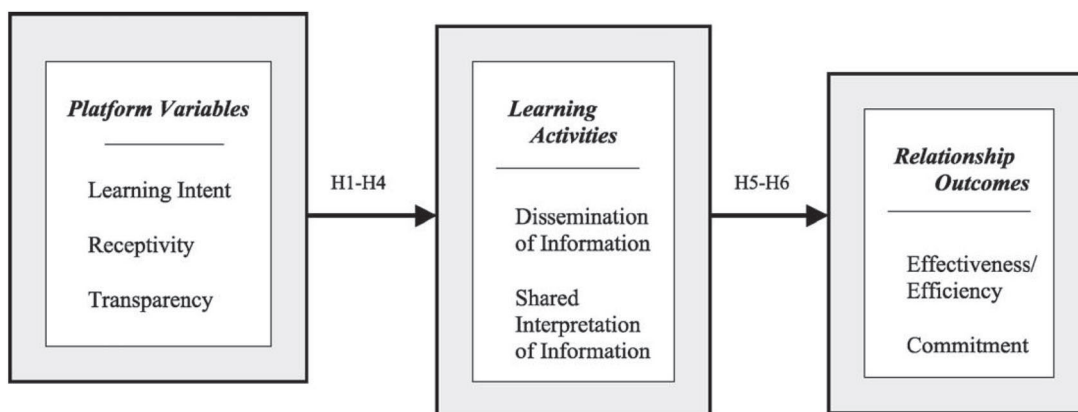


Figure 1. Learning activities in buyer-seller relationships: The platform variables as antecedents and relationship outcomes as consequences.

Receptivity, the third major component of the firm's platform for learning, connotes the firm's capacity or potential to learn. Receptivity is generally analogous to ability. Hamel (1991) defines receptivity as the firm's ability to actually absorb knowledge (Cohen and Levinthal, 1991). The firm's view of learning, or as Hamel suggests, the firm's "attitude" toward learning in general comes into play in its ability to absorb and process information. When there is a positive "attitude" toward learning in the firm, mechanisms are developed and accommodations are made for learning activities. Hamel also notes that diligence with regard to learning is a factor in the firm's receptivity. The benefits of learning often are not immediate. With regard to receptivity, the need for patience is significant. There must be unwavering support for the learning activities in interfirm partnering competence building, even though the increments are small and the rewards lag. When receptivity is high, that is when there is a positive "attitude" toward learning and when the support for learning is unwavering, there is a greater chance that learning activities will occur. This is the case in general, and we expect it to be the case for domain specific learning such as interfirm partner competence development. Thus:

Hypothesis 3: Receptivity results in greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management.

Motivation, ability, and opportunity individually influence behaviors. However, when the desire for some goal attainment, the willingness and interest in it, couples with the ability to engage in the relevant goal attainment behaviors and the opportunity to do so, the likelihood of goal attaining behaviors increase. For example, in their MOA (motivation, opportunity, and ability) model, MacInnis et al. (1991) suggested that brand information processing levels increase when motivation, opportunity, and ability are present. Their conclusion was that the marketing manager needs to increase all three to accomplish effective brand related communication outcomes. In sociology, a theory that has guided criminal prosecution law in the US suggests that with regard to a given deviant behavior, when motivation, opportunity, and ability are present together, it is highly likely that the behavior will occur (Merton, 1968).

Likewise, the optimal platform for the development of interfirm partnering competence exists when the firm has strong intent (motivation), is highly receptive (ability), and has high levels of transparency (opportunity). For example, learning intent with minimal transparency and/or minimal receptivity, will generate some learning activities, or ample transparency coupled with low intent and/or receptivity will generate some level of learning activity. Likewise, if strong intent couples with strong receptivity, some learning will occur, but more learning activity will occur if high levels of transparency are also present. The same can be said of strong receptivity joined with high transparency, but without intent, etc. Coupling learning intent with receptivity and transparency sets up the most pow-

erful conditions for increased learning activities. The combined influence of all three provide the optimal platform for learning activities associated with interfirm partnering competence development, suggesting:

Hypothesis 4: Combined effects of the three platform variables together, learning intent, transparency, and receptivity result in greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management.

2.2. Learning activities related to interfirm partnering competence and outcomes in the IFR

We expect that learning will generate some change in the firm's behavior (Argyris, 1994), an increase in partnering competence that will itself yield benefits. The interfirm literature suggests that IFRs exhibiting characteristics such as commitment are desirable because they perform better than arm's length transacting (e.g., Dwyer et al., 1987; Morgan and Hunt, 1994). Through the learning processes that underpin the development of partnering competence, the firm should have ample opportunity to observe and understand the economic pragmatism of close, partner-style IFRs. In addition, through these learning activities, the firm will not only understand the benefits of close IFRs, but will have a more understanding of how to make them. The increased partnering competence will result in more effective and efficient IFRs in general, but particularly with important core supplier relationships. By this, we mean that these IFRs will serve and perform well, accomplishing what the participant firms need them to accomplish. Also, increased partnering competence equips the firm to recognize, interpret, and formulate signals of commitment in the IFR dynamic that aids its development. This suggests the following:

Hypothesis 5: Greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management results in more effective and efficient IFRs.

Hypothesis 6: Greater levels of dissemination and shared interpretation of information related to IFRs, their making, and their management results in greater commitment in IFRs.

3. Methods

We collected data in a mail survey. Firms in SIC codes 28 (chemical and allied products), 30 (rubber and plastic products), 33 and 34 (metal fabrications and products), 35 (industrial machinery and equipment), 36 (electronic and electric equipment), and 37 (automotive and transportation equipment) comprised the sample. These industries were chosen because preliminary interviews suggested that the research topic was relevant and compelling for the incum-

bent firms. Further, interviews suggested that the construct variance would likely be sufficient for testing the posited relationships.

Beginning with a list of 925 firms from Dun and Bradstreet, data collection commenced with a rigorous prescreening by mail. Prescreening questions concerned the potential respondent's position, length of time in position, duties as a boundary spanner, time spent interfacing with other firms, and ability to report on required information (Campbell, 1955). This ensured that the respondent was qualified to report on the firm's general behavioral tendencies, on views towards IFR partnering, and on specific relationships. The managers isolated as key informants varied in their positions, with the vast majority holding the title of vice president or director of operations, procurement, manufacturing, materials management, or supply processing, for example. To further ensure that we had isolated the correct key informant, we used items in the questionnaire to verify again that the respondents were qualified to provide the requested information.

In the prescreening, 781 of the initial 925 were delivered, and 329 were returned. Prescreening information resulted in the elimination of ten responses. For the 329 qualified informants, we mailed out the main data collection package that included a personalized cover letter, the questionnaire, and a self-addressed envelope for returning the questionnaire. The mailing of 329 with one follow-up generated 176 completed questionnaires. The response rate of 23% of the original list and 55% of the prescreened firms falls within acceptable rates (Mishra et al., 1998). We evaluated nonresponse bias by comparing early and late respondents (Armstrong and Overton, 1977) on several dimensions including: sales volume, number of employees, age of the relationship, and percentage of sales accounted for by the focal supplier. The *t* tests showed no significant differences, suggesting that response bias was not a significant problem and that analysis could proceed on the 176 responses. Responding firms ranged in size from sales of US\$650,000 to US\$600 million. The firms ranged in age from several years to as old as 75 years with a mean of approximately 13 years of age. All of the firms were original equipment manufacturers and all were located in the US. Of the responding firms, 25% were in the metals fabrication industry, 15% each were in automotive and transportation equipment, industrial machinery, and electronic or electrical equipment manufacturing. The remaining firms were in chemical products, rubbers and plastics, or unclassified.

In developing the questionnaire, we drew on academic and practitioner literatures and on field interviews. One round of peer review focused on item content and a later second round of peer review focused on the questionnaire format. We pretested the questionnaire through in-depth interviews with executives from a small number of firms. Before the subjects completed the questionnaire, we reviewed the study objectives in general terms. After the subjects completed it, we extensively debriefed them. We used this pretesting approach first because ex-

perience suggested that the prescreening would provide us with sufficient information about response rate. Thus, pretesting to learn about response rate was unnecessary. The second reason for this type of pretest was that we believed the in-depth interviewing would be more effective in isolating problems with the new constructs in our study. In the pretest, all respondents completed the questionnaire in a reasonable time, understood the tasks, the instructions, and the items. In addition, all felt that the items tapped the constructs as intended and that the concepts were relevant.

An issue of particular concern in the pretest was ensuring that respondents changed focus appropriately when completing the questionnaire. For example, the measures of learning intent, receptivity, transparency, dissemination, and shared interpretation focused on IFRs with suppliers in general, while measures of effectiveness/efficiency and commitment focused on one specific supplier relationship. To ensure that respondents reported appropriately, we arranged items so that the two reporting tasks were physically separated in the instrument. In addition, items intended to "force" the transition from supplier relationships in general to a specific supplier relationship separated the sections. The pretest ascertained that the respondents readily made the transition between the reporting tasks.

With regard to specific measures for the platform variables, a four-item scale assessed *learning intent*. An example item is "Our intent is to learn all we can about how to be an effective partner to our suppliers." We operationalized *receptivity* through five statements such as "We have a strong capacity for learning how to be more responsive in our supplier relationships." For *transparency*, executives responded to four statements such as "We look for opportunities to learn about what it takes to develop productive relationships with suppliers." In each case, respondents indicated their agreement or disagreement on a one to seven scale. One denoted strong agreement and seven denoted strong disagreement. Appendix A shows the items the measures in the study.

For the learning activities, six items measured *information dissemination*. Executives responded to statements such as, "If something important happens with a supplier, everyone involved is informed within a short time period." For *shared interpretation* we developed a five-item scale. An example item is, "If we see that a mistake has been made, we retrace our steps and actions to understand what happened." Responses ranged from one for strong agreement to seven for strong disagreement for both.

The two outcomes, IFR effectiveness/efficiency and commitment, focused on a specific supplier relationship rather than partnering in general. A list of seven bipolar adjectives assessed increases in *relationship effectiveness/efficiency*. Executives responded on a one to seven scale to the adjectives. Five items such as "We expect this supplier to be working with us for a long time," assessed *commitment*. Responses ranged from one for *strong disagreement* to seven for *strong agreement*.

We validated measures with a confirmatory factor analysis (CFA). For hypotheses testing, we used OLS regression because the hypotheses included a three-way product term, which precluded the use of structural equations approaches that do not accommodate three-way interactions (e.g., Ping, 1995). Given that the use of product terms can introduce collinearity (Cohen and Cohen, 1983), we used residual centering where we removed the effects of the "main effect" variables from the product term by regressing the product term on the "main effect" variables. The remaining variance was due to the interaction and distinct from overlap with other variables. We used this residual centering procedure for each product term to derive a distinct three-way interaction component by which we tested Hypothesis 4 (Lance, 1988).

We included three control variables in preliminary data analysis. Several studies have found that *relationship age* can be a potential source of variance that confounds research findings (e.g., Mohr et al., 1996). Research also shows that the *environmental turbulence* can influence IFRs (e.g., Noordewier et al., 1990). Although, we realize that these effects can be important, the focus of our study was to investigate the relationships apart from the environment. For the measure, secondary industry data were used to derive a one (not turbulent) to seven (very turbulent) classification. Also, we suspected that extreme *dependence* in the IFR could distort our results, and thus included it as a control variable.

4. Results

Table 1 shows the CFA results. The χ^2 value was 683.03 with $df = 385$. Fit indices (CFI, NFI, and IFI) ranged at or near 0.93, which compares favorably with benchmarks. Construct reliabilities exceed 0.90, which meets benchmarks (Nunnally and Bernstein, 1994). Average variance extracted for ranges from 0.66 to 0.76, again meeting accepted standards. Item loadings are all statistically significant and of sufficient magnitude to be substantively meaningful. These results suggest that the measures exhibit reasonable levels of unidimensionality, internal consistency, and reliability. The zero-order correlations between several of the constructs caused us concern. We evaluated discriminant validity through a series of pairwise CFAs. For all pairs of multiple-item reflective measures, the fit of a CFA where the correlation was constrained to unity was compared to the fit of an unconstrained model (Bagozzi et al., 1991). In all cases, the unconstrained model provided a significantly superior fit, suggesting adequate discriminant validity between the measures. The effectiveness/efficiency scale is formative, thus the precision and thoroughness with which the construct domain is tapped (content validity) provides the major validation tool (Bollen and Lennox, 1991). Our efforts in the preliminary interviews and pretesting, along with an inspection of the items (Appendix A), provide evidence of validity. For hypotheses testing, we developed summated composites for the constructs.

Table 1. CFA results for reflective measures

Construct	Construct reliability	Average variance extracted	Standardized item loading	t Value
<i>Learning intent</i>	0.92	0.75		
Learning intent1			.88	18.65
Learning intent2			.79	14.55
Learning intent3			.93	-
Learning intent4			.86	17.89
<i>Transparency</i>	0.92	0.74		
Transparency1			.84	14.56
Transparency2			.86	-
Transparency3			.84	14.32
Transparency4			.90	16.42
<i>Receptivity</i>	0.91	0.66		
Receptivity1			.79	-
Receptivity2			.84	12.29
Receptivity3			.84	12.24
Receptivity4			.79	11.23
Receptivity5			.80	11.57
<i>Shared interpretation</i>	0.93	0.73		
Shared1			.76	12.41
Shared2			.84	14.90
Shared3			.85	15.08
Shared4			.93	18.31
Shared5			.88	-
<i>Dissemination of information</i>	0.94	0.72		
Dissemination1			.77	13.66
Dissemination2			.91	19.71
Dissemination3			.92	-
Dissemination4			.76	13.25
Dissemination5			.86	16.81
Dissemination6			.87	17.48
<i>Commitment</i>	0.94	0.76		
Commitment1			.79	14.99
Commitment2			.89	20.55
Commitment3			.78	14.83
Commitment4			.94	24.67
Commitment5			.95	-

For the control variables of relationship age, dependence, and environmental turbulence, results indicated that the equations were not statistically significant and the variance explained was trivial. None of the individual parameter estimates were significant. For the sake of parsimony, the control variables were deleted from analyses. OLS regression estimates testing Hypothesis 1, Hypothesis 2, Hypothesis 3, Hypothesis 4, Hypothesis 5, and Hypothesis 6 are shown in Table 2.

In Hypothesis 1, Hypothesis 2, and Hypothesis 3, we posited that the platform variables of learning intent, receptivity, and transparency would result in more IFR related learning activities by the firm. Overall, the two equations testing the hypotheses were statistically significant. For dissemination of information, $F = 48.64$ ($df = 168,3$) and the platform variables explained 46% of the variance. For shared interpretation, $F = 41.74$ ($df = 168,3$) with 42% of

Table 2. OLS regression results

Dependent variables	Independent variables	Standardized estimate	Unstandardized estimates	t Value	Significance ^a
Dissemination of information <i>F</i> (168,3) = 48.64; <i>R</i> ² = .46	Learning intent	0.139	0.087	0.77	.22
	Transparency	0.499	0.297	2.75	.00
	Receptivity	0.475	0.342	3.30	.00
	Learning intent	0.149	0.093	0.83	.20
	Transparency	0.449	0.267	2.64	.01
	Receptivity	0.516	0.372	3.56	.00
	Learning intent×Transparency	-0.007	-0.285	2.02	.02
	Receptivity×Learning intent	0.002	0.009	0.06	.47
	Transparency×Receptivity	0.005	0.249	1.53	.07
	Learning intent×Receptivity×Transparency	0.002	0.074	1.32	.10
Shared interpretation <i>F</i> (164,7) = 22.02; <i>R</i> ² = .48	Learning intent	0.229	0.196	1.69	.05
	Transparency	0.148	0.146	1.36	.09
	Receptivity	0.433	0.353	3.15	.00
	Learning intent	0.213	0.182	1.58	.06
	Transparency	0.401	0.328	2.93	.00
	Receptivity	0.194	0.192	1.78	.04
	Learning intent×Transparency	-0.007	-0.374	2.57	.00
	Receptivity×Learning intent	0.003	0.237	1.50	.06
	Transparency×Receptivity	0.002	0.125	0.75	.23
	Learning intent×Receptivity×Transparency	0.001	0.039	0.68	.25
Effectiveness/efficiency <i>F</i> (169,2) = 6.03; <i>R</i> ² = .07	Dissemination of information	0.113	0.147	1.29	.10
	Shared interpretation	0.179	0.169	2.04	.02
Commitment <i>F</i> (169,2) = 5.81; <i>R</i> ² = .07	Dissemination of information	0.181	0.178	2.06	.02
	Shared interpretation	0.111	0.079	1.26	.10

a. One-tailed significance tests.

the variance explained. In Hypothesis 1, we expected that learning intent would positively affect information dissemination and shared interpretation of information. As shown in Table 2, the standardized estimate of 0.139 for dissemination of information is not statistically significant ($t = 0.774$, $p = .22$). However, the estimate of 0.229 for shared interpretation of information is statistically significant ($t = 1.69$, $p = .05$), suggesting partial support for Hypothesis 1. Hypothesis 2 involved the effect of transparency on dissemination of information and shared interpretation of information. The estimate of 0.499 for dissemination of information and 0.148 for shared interpretation were both statistically significant ($t = 2.75$, $p < .00$ and $t = 1.36$, $p = .09$, respectively), suggesting limited support for Hypothesis 2. In Hypothesis 3, we expected that receptivity would lead to enhanced learning activities with regard to the IFR. The estimates of 0.475 ($t = 3.30$, $p < .00$) for dissemination of information and 0.433 ($t = 3.15$, $p < .00$) for shared interpretation of information suggest support for Hypothesis 3.

Hypothesis 4 indicated that in combination the platform variables would enhance learning activities to a greater extent than individually. The parameter estimate of 0.002 for the three-way product term was significant at $p = .10$ for dissemination of information. However, the estimate of 0.001 for shared interpretation of information was not sta-

tistically significant. These results suggest limited support for Hypothesis 4.

Hypothesis 5 and Hypothesis 6 involved the effects of learning activities on a specific supplier relationship in terms of relationship effectiveness/efficiency and the level of commitment. Both equations were statistically significant with 7% of the variance explained in each case. Specifically, Hypothesis 5 stated that dissemination of information and shared interpretation of information would result in more effectiveness/efficiency in the supplier relationship. Estimates of 0.113 ($t = 1.29$, $p = .10$) and 0.179 ($t = 2.04$, $p = .02$) indicate support for Hypothesis 5. In Hypothesis 6, we expected that dissemination and shared interpretation of information would influence commitment in the relationship. At 0.181 ($t = 2.06$, $p = .02$) and 0.111 ($t = 1.26$, $p = .10$), both estimates are statistically significant, suggesting support for Hypothesis 6.

5. Discussion and implications

In this paper, we investigated intrafirm conditions that provide the platform for learning activities that are integral to building interfirm partnering competence. Building interfirm partnering competence may involve consid-

erable benefits given that a number of experts advocate viewing IFRs as strategic resources or assets (e.g., Achrol, 1991; Day, 1994). We examined the notion that for learning activities to occur, specifically learning activities focused on the development of interfirm partnering competence, certain supporting conditions should be present in the firm. Essentially, we suggest that the firm must provide the appropriate platform for learning activities. Drawing on work by Hamel (1991), we conceptualize the platform for learning as manifest in the firm's culture in terms of learning intent, receptivity, and transparency, which roughly equate to motivation, ability, and opportunity in individuals.

While some minimal level of intent, receptivity, and transparency are present in the firm, we contend that the higher those levels are, the more the firm will engage in learning activities for interfirm partnering competence. We expected that the platform variables individually and in combination would enhance learning activities. The general pattern of results suggested support for the individual effects of the platform variables on dissemination and shared interpretation of information. Our hypothesis regarding the combined effects, however, received limited support for dissemination of information.

In addition to exploring the platform variables, we expected the firm's learning activities in interfirm partnering competence would influence its IFRs in a positive way. We expected IFRs to be more effective and efficient and show greater levels of commitment. Overall, our expectations that learning activities would result in positive outcomes in IFRs were confirmed in these data. Both dissemination of information and shared interpretation positively influenced the IFR on which the executives reported.

5.1. *Limitations and research implications*

As with all research, our study has its limitations. Of some concern to us were the correlations between the platform variables. Although we checked for discriminant validity, other problems could remain with regard to the results. While research suggests that when considered in conjunction with our sample size, these correlations should not be problematic (Mason and Perreault, 1991), caution is still warranted. The major implication in the results is Type II error where we would fail to uncover significant relationships among the variables. We suspect that this could be a factor in our study. While we believe that these constructs are conceptually distinct and have evidence to that effect, we acknowledge that collinearity could influence the results. In future studies, alternative measures of the platform variables should be developed with consideration for multicollinearity. Perhaps observational methods could be used to develop objective measures. These could include the allocation of managerial time and financial support for learning activities, for example.

A number of important research implications derive from this study beyond those that we have noted. This study demonstrates that learning and competence build-

ing can be measured through specific activities known to be integral to learning. Extant research has relied on measuring organizational memory to assess learning. Now, our research provides an additional avenue for addressing the thorny problem of how to assess and measure learning. Another implication of this research is the effect of learning on outcomes. Learning outcomes have been the subject of much discussion but little empirical testing. Here, we show that learning related to interfirm partnering competence associates with desirable characteristics in IFRs. The generation of further outcomes in terms of the firm's overall economic and strategic performance was not our focus. However, future research should certainly consider this.

A number of other important research implications and issues that warrant consideration in future research remain. For example, we suspect that unlearning may be just as important as learning. Unlearning involves jettisoning old frameworks. Important future research questions concern the role of unlearning and relationship suboptimization in the development of interfirm partnering competence. Often, IFRs involve high switching costs, investment of dedicated assets, and/or limited alternatives. Therefore, ineffective and suboptimal IFRs can and do continue indefinitely. Understanding the learning or unlearning processes necessary to affect positive change in suboptimal IFRs is a compelling issue for future research.

5.2. *Managerial implications*

From a practical and managerial standpoint, many important insights can be gained from this research. First, with the full understanding of how important learning and competence building is in the contemporary competitive environment, our study demonstrates to managers how the conditions within the firm play a large part in the generation of learning and competence building. A mindset and philosophy within the firm that values and perpetuates learning is crucial. Support in terms of resources, time, and upper management backing is central to competence building and learning. Managers must "talk the talk" with regard to learning throughout the firm to compete successfully. That is, managers must constantly voice their support and value of learning. In conjunction with "talking the talk," it is equally important that management "walks the walk." By this, we mean take action and allocate resources to the creation of a learning culture. Learning does not come without costs in managerial time and in other resources and investments. If these resource commitments are not made, voicing support and value will not ring sincere.

For managers, our research demonstrates that learning can and does generate positive outcomes for the firm. Our research suggests that outcomes in the form of improved performance and dynamics in specific IFRs are realized by the firm. However, expectations of when those payoffs come need to be realistic. Some benefits of learning may not be seen for extended periods of time. In addition, how learning pays off in the firm's financial per-

formance is not yet understood especially with regard to capabilities and competencies such as interfirm partnering. Managers must understand that perseverance and patience may be a large factor in garnering the rewards of competence building.

Appendix A. Measures of central constructs

Learning intent – In general, in my firm ...

1. our intent is to learn all we can about how to be an effective partner with our suppliers.
2. there is a lot of incentive for learning ways to maintain close supplier relationships.
3. we aim to know and understand as much as we can about forming close alliances with suppliers.
4. we are highly motivated to learn how to make strong relationships with suppliers.

Scale anchors: 1 = *strongly disagree*; 7 = *strongly agree*.

Transparency – In general, in my firm ...

1. we view close relationships with suppliers as a chance to learn more about being a good partner.
2. we take advantage of every chance to learn how to make our supplier relationships work better.
3. seeks market leadership?
4. focuses on strategic targets and goals?

Scale anchors: 1 = *not at all*; 7 = *very large extent*.

Receptivity – In general, in my firm ...

1. we have developed systems that facilitate learning from our relationships with suppliers.
2. we have a strong capacity for learning how to be more responsive in our supplier relationships.
3. we are proficient at understanding how to be a good partner with supplier firms.
4. we have the ability to learn how to improve our relationships with suppliers.
5. we are highly receptive to learning about how to relate better to suppliers.

Anchors: 1 = *not at all*; 7 = *very large extent*.

Dissemination of information – In my firm ...

1. information about supplier performance is disseminated to other departments regularly.
2. we discuss any new developments in our supplier relationships with other departments.
3. we openly discuss supplier relationship management issues with others.
4. if something important happens with a supplier every-

one involved is quickly informed.

Scale anchors: 1 = *strongly disagree*; 7 = *strongly agree*.

Shared interpretation of information – In our supplier relationships ...

1. if a program is successful, we try to understand what made it work well.
2. we quickly try to identify our mistakes so that they are not repeated.
3. if something seems to be going wrong, we try hard to figure out why.
4. we constantly assess and analyze the effects of our decisions so that we know what adjustments to make.
5. if a mistake has been made, we trace our steps and actions to understand what has happened.

Scale anchors: 1 = *strongly disagree*; 7 = *strongly agree*.

Relationship change – During the last year, how has your firm's relationship with this supplier changed?

1. more effective/less effective
2. better/worse
3. more high quality/less high quality
4. more efficient/less efficient
5. more smooth/less smooth
6. more strong/less strong
7. more productive/less productive

Scale response range 1 to 7; all items reverse coded.

Commitment

1. We have a strong sense of loyalty to this supplier.
2. We expect this supplier to be working with us for a long time.
3. We are willing to make long term investments to help this supplier.
4. We are really committed to developing a working relationship with this supplier.
5. We see this relationship as a long term alliance.

Scale anchors: 1 = *strongly disagree*; 7 = *strongly agree*.

Control variables

Age: Please indicate the age of your firm.

Environmental turbulence: Coded based on secondary industry and firm information: 1 = *least turbulent*; 7 = *most turbulent*.

Dependence: *Supplier is more dependent on you* (1) to *Your firm is more dependent on the supplier* (7).

Appendix B. Zero-order correlation matrix

	Learning Intent	Transparency	Receptivity	Dissemination of information	Shared interpretation of information	Effectiveness/efficiency	Commitment
Learning Intent	1.00						
Transparency	.83	1.00					
Receptivity	.81	.79	1.00				
Dissemination of information	.61	.64	.64	1.00			
Shared interpretation of information	.62	.63	.58	.53	1.00		
Relationship effectiveness/efficiency	.27	.27	.22	.25	.21	1.00	
Commitment	.28	.30	.22	.18	.23	.43	1.00

References

- Achrol RS. Evolution of the marketing organization: new forms for turbulent environments. *J Mark* 1991;55:77- 93 (October).
- Argyris C. *On organizational learning*. Cambridge (MA): Blackwell, 1994.
- Armstrong JS, Overton TS. Estimating nonresponse bias in mail surveys. *J Mark Res* 1977;14:396-402 (August).
- Badaracco JL. *The knowledge link*. Boston (MA): Harvard Business School Press, 1991.
- Bagozzi R, Yi Y, Phillips LW. Assessing construct validity in organizational research. *Adm Sci Q* 1991;36:421- 58 (September).
- Bollen KA, Lennox R. Conventional wisdom on measurement: a structural equation perspective. *Psychol Bull* 1991;110:305-14 (September).
- Campbell DT. The informant in quantitative research. *Am J Sociol* 1955; 60:339- 42 (January).
- Cohen J, Cohen P. *Applied multiple regression/correlation analysis for the behavioral science*. 2nd ed. Hillsdale (NJ): Lawrence Erlbaum Associates, 1983.
- Cohen WM, Levinthal DA. Absorptive capacity: a new perspective on learning and innovation. *Adm Sci Q* 1990;35:128- 52 (March).
- Day GS. The capabilities of market-driven organizations. *J Mark* 1994; 58:37- 52 (October).
- Dwyer FR, Schurr PH, Oh S. Developing buyer - seller relationships. *J Mark* 1987;51:11 -27 (April).
- Fiol CM, Lyles MA. Organizational learning. *Acad Manage Rev* 1985;10:803- 13 (October).
- Grant RM. Toward a knowledge-based theory of the firm. *Strategic Manage J* 1996;17:109- 22 (winter).
- Hamel G. Competition for competence and inter-partner learning within international strategic alliances. *Strategic Manage J* 1991;12:83 - 104 (summer).
- Johnson JL. Strategic integration in industrial distribution channels: Managing the interfirm relationship as a strategic asset. *J Acad Mark Sci* 1999;27:4- 18 (winter).
- Lance CE. Residual centering, exploratory and confirmatory moderator analysis and decomposition of effects in path models containing interactions. *Appl Psychol Meas* 1988;12:163- 75 (June).
- Larson A. Network dyads in entrepreneurial settings: a study of the governance of exchange relationships. *Adm Sci Q* 1992;37:76 - 104.
- Levinthal DA, March JG. The myopia of learning. *Strategic Manage J* 1993;14:95- 112 (winter).
- MacInnis DJ, Mooreman C, Jaworski BJ. Enhancing and measuring consumers motivation, opportunity, and ability to process brand information from ads. *J Mark* 1991;55:32 - 53 (October).
- March JG. Exploration and exploitation organizational learning. *Organ Sci* 1991;2:71- 87 (February).
- Mason CH, Perreault WD. Collinearity, power, and interpretation of multiple regression analysis. *J Mark Res* 1991;28:268- 81 (August).
- Merton RK. *Social theory and social structure*. New York: Free Press, 1968.
- Mishra DP, Heide JB, Cort SG. Information asymmetry and levels of agency relationships. *J Mark Res* 1998;35:277- 95 (August).
- Mohr J, Fisher RJ, Nevin JR. Collaborative communication in interfirm relationships: moderating effects of integration and control. *J Mark* 1996;60:103-15 (July).
- Mooreman C, Miner AS. The impact of organizational memory on new product performance. *J Mark Res* 1997;34:91 -105 (February).
- Morgan RM, Hunt S. The commitment- trust theory of relationship marketing. *J Mark* 1994;58:20 - 38 (July).
- Nonaka I. A dynamic theory of organizational knowledge creation. *Organ Sci* 1994;5:14- 37 (February).
- Noordewier TG, John G, Nevin JR. Performance outcomes of purchasing arrangements in industrial buyer- vendor relationships. *J Mark* 1990; 54:80- 93 (October).
- Nunnally J, Bernstein IH. *Psychometric theory*. 3rd ed. New York: McGraw-Hill, 1994.
- Ping RA. A parsimonious estimating technique for interaction and quadratic latent variables. *J Mark Res* 1995;32:336-47 (August).
- Sinkula JM. Marketing information processing and organizational learning. *J Mark* 1994;58:35 - 45 (January).
- Slater SF, Narver JC. Market orientation and the learning organization. *J Mark* 1995;59:63 - 74 (July).
- Teece DJ, Pisano G, Schuen A. Dynamic capabilities and strategic management. *Strategic Manage J* 1997;18:509- 33 (August).
- Walsh JP, Ungson GR. Organizational memory. *Acad Manage Rev* 1991; 16:57- 91 (January).