

The Influence of Inertia on Supply Chain Partner Selection

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Abstract

“Choosing a suitable partner” is one of the critical success factors in the process of supply chain management, especially in a long-term relationship. This study employs the resource dependence perspective and the inertia perspective as lenses to investigate information collection behavior in supply chain partner selection that can lead to satisfactory outcome for the collaboration. The results show that inertia is negatively associated with information collection behavior, which in turn associates positively with outcome of the alliance. The finding reveals that firms tend to devote resources to information collection, rather than organizational and personal inertia if high uncertainty is perceived. Consequently, we suggest that in the context of high uncertainty, firms should overcome the limitations of inertia, then narrow the scope of information sources and enlarge the extent of information on evaluative criteria to gain a better outcome.

Key words: relationship satisfaction, partner selection, resource dependence perspective, inertia, information collection behavior



組織慣性對挑選供應鏈夥伴的影響

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摘要

在供應鏈管理上，「挑選合適的合作夥伴」是關鍵成功因素之一。此議題在管理長期合作關係上尤其重要。本研究從資源相依與組織慣性觀點出發，希望在挑選供應鏈合作夥伴方面，能深入研究資訊收集行為與組織慣性是如何影響合作關係滿意度。研究結果顯示，高組織慣性會使得企業較不會廣泛或深入地收集與合作夥伴相關的資訊，進而使得合作關係的滿意度降低。而在與透過廣泛或深入地收集資訊而挑選出來的夥伴進行合作時，會產生較高的滿意度。若合作計畫具有高度的不確定性，資訊收集行為對合作滿意度的影響程度會加深。因此，本研究建議，企業在進行不確定性高的供應鏈合作計畫時，應該儘量克服組織慣性對資訊收集行為的限制，以提升合作滿意度。

關鍵字：關係滿意度、合作夥伴選擇、資源相依觀點、組織慣性、資訊收集行為

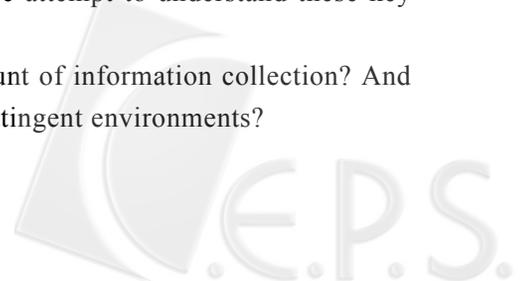


1. Introduction

Collaboration among supply chain members has been an emerging strategy in industrial firms. Inter-firm collaboration can facilitate quick response to the ever changing market environment: shorter product cycle time and time to market, radical technological changes, diversified customer demands, and globalization. How to collaborate and coordinate with partners to ensure efficiency and responsiveness of supply chain, from materials and components, to logistics and distribution centers, to product design, is one of the most challenging issues for firms (Turban et al., 2004). The main focus has been on the importance of managing the supply chain due to the increasing cost and risk, such as investment in IT and the coordinative cost of inter-firm process integration and collaborative design. Li et al. (2006) proposed that supply chain management practice, especially supplier partnership and level of information sharing, could enhance organizational competitive advantage and performance. Ireland et al. (2002) propose that effective long-term collaboration management, to avoid partners' opportunistic behaviors of moral hazard and adverse selection, should begin with "selecting right partner." This critical decision influences the achievement of supply chain improvement (McIvor and Humphreys, 2004), since the partnership determines mixture of capabilities and resources, ability to achieve strategic goals, and retention of partners' knowledge and competencies.

Previous studies address this issue by two opposite approaches. On the one hand, research focuses on identification and priority of a variety of evaluation criteria applied to pick out one complementary partner (Hitt et al., 2000). An interesting question is whether a firm would infuse lots of effort for collecting information about all evaluative criteria due to difficulty in producing an exhaustive list of criteria and high information search cost. On the other hand, research reveals that relying on routine or past experience is more effective than extensive information collection, in turn raising better cooperative performance (Saxton, 1997). A contradiction remains among explanations for effects of extensive information collection and inertia (past experience and routine) on partner selection. We attempt to propose a contingent view of extensive information collection and inertia, to explain firms' behavior in the process of forming alliance. Then, we hope to recommend how firms can get maximum collaborative results with minimum effort and cost in the process of partner selection. Accordingly, we attempt to understand these key research questions:

1. How does a firm determine the scope and amount of information collection? And does the scope and amount vary in different contingent environments?



2. What relationship is there between inertia and information collection? And will the relationship change in different contingent environments?

2. Theoretical Background and Hypotheses

2.1 Information Collection Mechanism

In the resource dependence perspective, uncertainty emerging from interaction of organizations and important environmental elements could only be reduced by the environmental enactment process (Pfeffer and Salancik, 1978). This process could mitigate the interconnectedness between organization and environment by analyzing information spread through the environment and alleviate the impact from the changing environments. Pfeffer and Salancik (1978) proposed that building up a mechanism for information collection could facilitate this process for analyzing information more efficiently and effectively in given organization structure. Nevertheless, Pfeffer and Salancik (1978) stated that firms usually do things in a certain way when performing environmental enactment process. This behavior is a source of resistance to change and may bias decision-making since it is sometimes more a matter of preference than a necessity. Research based on the perspective of decision rationality also emphasizes the need of environment scanning and information collection, and the importance of analyzing information for making the choice (Hough and White, 2003). By gathering information related to potential partners, firms could recognize the uncertainty and risk in the environment and then pick out the optimal partner for promoting the effectiveness and performance of alliances.

Some empirical studies support that firms must search for as much information related to candidates as possible for improving the effectiveness and performance of strategic alliances (e.g. Angeles and Nath, 2000; Hitt et al., 2000). Firms could reduce performance risk and relational risk by filtering partners without competence and compliance for cooperation based on the collected information (Das and Teng, 1998). Hence, firms could increase the probability of selecting satisfactory partners if they are devoted to collecting information and formalizing the information collection mechanism (Nijssen et al., 1999). Nijssen et al. (1999) defined the information collection mechanism as gathering information, determining selection criteria, and using information to evaluate and select partners. "Gathering information" is looking for information from diverse sources. The later two steps focus on collecting and analyzing information to evaluate potential partners based on a variety of criteria.

The sources of information are varied, such as trade publications, direct contact with related customers and suppliers, exhibition, network society, attendance at industry-related meetings, and so on (McGee and Sawyer, 2003). More sources and more information from each source will promote alliance outcome because of protection of organization against strategic uncertainty (McGee and Sawyer, 2003; Nijssen et al., 1999). Thus, we propose:

H1-1. Alliance outcome is positively associated with utilization of information source.

Geringer (1991) emphasized the importance of selection criteria as well as the decision itself regarding partner selection. In general, the evaluation criteria vary with context, as well as the requirements and goals of supply chain collaboration. For instance, Bharadwaj (2004) proposed that delivery, price, quality and service are the most important decision criteria for supplier sourcing. However, Katsikeas et al. (2004) suggested that reliability and technological capability are critical selection criteria besides price and service. Furthermore, the inventory of evaluative criteria for facilitating partner selection in EDI cooperation listed by Angeles and Nath (2000) is totally different from by Hitt et al. (2000). Empirical studies support the positive influence of evaluation criteria on alliance outcomes (Nielsen, 2003; Saxton, 1997). These criteria are related to the operational skills and resources for achieving objectives of collaboration, as well as the efficiency and effectiveness of partners' cooperation. Hence, collecting information based on these criteria could assist firms to fulfill objectives of collaborations and enhance reliability of partnerships. Drawing on this reasoning, we propose:

H1-2. Alliance outcome is positively associated with the degree of information acquisition by evaluative criteria.

2.2 Effect of Inertia

Inertia derived from an evolutionary perspective is a kind of organizational routine that is developed as organizations respond to similar stimuli over time. It is a habit of repetitive reaction and therefore is the source of continuity in organizational behavior (Feldman, 2000). Following this tradition, searching activities that firms exercise usually focus on the options that are readily available or that have been directed at similar problems in the past (Cyert and March, 1963). The results of past searches become natural starting points for initiating a new search (Stuart and Podolny, 1996). Firms build a history of alliances with partners, which develop continuity in how they respond to recurring stimuli (Saxton, 1997; Stuart and Podolny, 1996). According to the evolutionary perspective, local search and relying on past experience could facilitate selecting appropriate partners (Gulati and Gargiulo, 1999; Zollo et al., 2002). Firms with inertia of previous alliance selection routines usually cooperate with past partners on most occasions.

However, Hannan and Freeman (1984) propose that inertia, as a dynamic concept, exists when the speed of reorganization is much lower than the rate at which environmental conditions change. Once an organization cannot get information as quickly as their environment changes, an organization will face danger of replacement (Hannan and Freeman, 1984). Denerell and March (2001) proposed that the influence of inertia leads to a bias against new alternatives that require practice and/or involve risk. Organizations will be unable to correct early sampling errors and then lose adaptive capability (Denerell and March, 2001). Namely, inertia will bias decision of partner selection and trap firms in a swamp of past experience, since organizations discard extensive information collection. Thus, we propose:

H2-1. Utilization of information sources is negatively associated with organizational inertia.

H2-2. The degree of information acquisition by evaluative criteria is negatively associated with organizational inertia.

Organizational decision will be restricted by path of firms, as well as the decision maker's experiences or habits. Based on the perspective of decision rationality, decision makers perceive external events and trends by environmental scanning and then proceed to planning, decision-making and strategy formulation (Rhyne, 1985). The degree of organizational advantages obtained from strategic information depends on how scanning is conducted by executives (Rhyne, 1985). Before carrying out environmental scanning, executives will choose some specific segments for collecting information based on their experience, learning paths and informal personal relationships. If executives' responsiveness are slower than the rate of environmental change, firms will operate less efficiently, leverage more logistics and production cost, and then finally revenue (Smith et al., 2005). The empirical finding related to supply chain management indicates that managerial inertia reduces the ability of responding to customer pressure, in turn lower the overall performance of supply chain (Smith et al., 2005). Studies in executives' selection perception support that executives will persist in their accustomed methods, such as those gained during past work experience in jobs within function areas of an organization, to approach and solve problems and tasks (McGrath and Kelly, 1989). Executives perform bounded rationality and are restricted to a particular area by experience or habit involuntarily when they collect information for partner selection. Thus, we propose:

H3-1. Utilization of information sources is negatively associated with personal inertia.

H3-2. The extent of information on evaluative criteria is negatively associated with personal inertia.



2.3 Contingent Effect on Information Collection Mechanism

Although Pfeffer and Salancik (1978) believed in collecting lots of environmental information to reduce uncertainty, they highlighted a dilemma of information collection. On the one hand, organization will be swamped with information overload, incur too much cost without sufficient compensation, and act too slowly relative to the changing environment, once organizations try to collect every bit of information (Pfeffer and Salancik, 1978). On the other hand, firms will be unprepared to face threats to survival when they make decisions hurriedly and carelessly based on insufficient information (Pfeffer and Salancik, 1978). Pfeffer and Salancik (1978) further stated that relying on routines would produce mismatch between organization outcome and intentions of members in a changing environment.

In perspective of decision rationality, researchers agree that organizations adjust comprehensiveness of information collection by varying level of environmental uncertainty, e.g. Esidhardt (1989) and Hough and White (2003). Broadening information collection and analysis in dynamic environments could lead executives to devise successful outcomes, and utilizing existing information and past experience (inertia) in stable environments could formulate effective decisions (Hough and White, 2003).

Hence, organizations will consider more factors regarding partners' characteristics and competencies, in order to acquire more information and reduce uncertainty when they think this collaborative project is more complex and dynamic. Hence, we propose:

H4-1. Uncertainty of decision nature moderates the association between utilization of information sources and alliance outcome. In particular, uncertainty of decision nature amplifies the positive association between utilization of information sources and alliance outcome and vice versa.

H4-2. Uncertainty of decision nature moderates the association between information acquisition by evaluative criteria and alliance outcome. In particular, uncertainty of decision nature amplifies the positive association between utilization of information sources and alliance outcome and vice versa.

2.4 Contingent Effect on Inertia

Inertia is generally a source of existing information and the most efficient way to achieve objectives in a stable environment due to reliability (Gulati, 1995). Nevertheless, inertia hinders the breakthrough of organization action and results in insufficient adaptiveness (Denerell and March, 2001). Dean and Sharfman (1996) proposed that successful firms are more likely than unsuccessful firms to use rational method to collect additional information and conduct more analysis in a high-velocity environment. In the

field of relationship marketing, inertia derived from deep relational commitment also leads to the paradox of whether deep relationship restrain marketplace adaptability or placed firms in a better competitive position due to mutual trust and understanding (Beverland, 2005). According to the result of Beverland's (2005) study, the state of competitive environment determines appropriateness of inertia. As markets evolved, it is better for firms to avoid over-reliance on a few strong relationships. On the contrary, it is suitable to base selection on inertia as the growth rate of market is slower. Dean and Sharfman (1996) propose that successful firms are more likely than unsuccessful firms to use rational method to collect additional information and conduct more analysis in a high-velocity environment. In an unstable environment, executives will make nonviable strategic decisions once they fail to systematically collect and analyze information related to environmental constraint and development (Dean and Sharfman, 1996). In a stable environment, executives rely on past experience to perceive environmental change and don't devote themselves to extensive information collection and analysis (Dean and Sharfman, 1996). Accordingly, we think the relationship between inertia and information collection mechanism would also be affected by uncertainty. Hence, we propose:

H5-1. Uncertainty of decision nature moderates the association between organizational inertia and utilization of information sources. In particular, uncertainty of decision nature reduces the negative association between organizational inertia and utilization of information sources and vice versa.

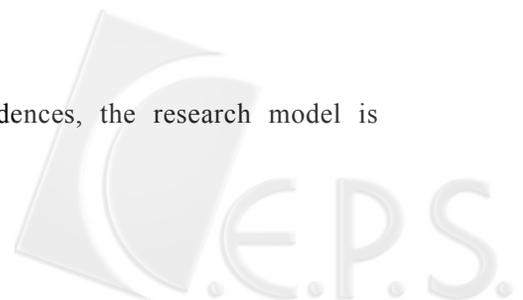
H5-2. Uncertainty of decision nature moderates the association between organizational inertia and information acquisition by evaluative criteria. In particular, uncertainty of decision nature reduces the negative association between organizational inertia and information acquisition by evaluative criteria and vice versa.

H5-3. Uncertainty of decision nature moderates the association between personal inertia and utilization of information sources. In particular, uncertainty of decision nature reduces the negative association between personal inertia and utilization of information sources and vice versa.

H5-4. Uncertainty of decision nature moderates the association between personal inertia and information acquisition by evaluative criteria. In particular, uncertainty of decision nature reduces the negative association between personal inertia and information acquisition by evaluative criteria and vice versa.

2.5 Research Model

Following theoretical inferences and empirical evidences, the research model is provided, as Figure 1.



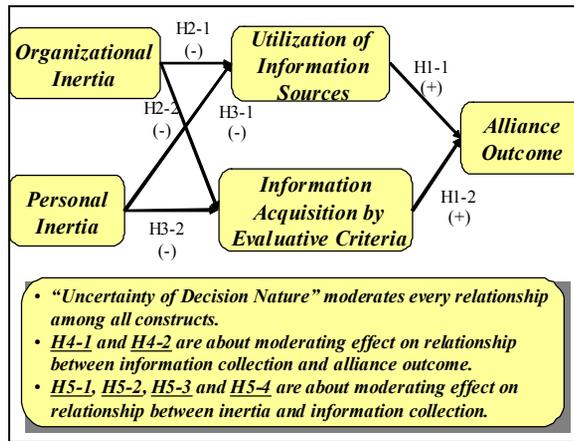


Figure 1: Research Framework

3. Research Design and Methodology

3.1 Operationalization

The instruments for the constructs were adapted from the literature and were revised to fit our research context, as summarized in Table 1. The full questionnaire is shown in Appendix A.

Table 1: Operationalization for constructs

Construct	Operationalized Definition	Source of Measurement
Utilization of Information Sources	Extent of sources and information collected from each source. It consists of three dimensions, including range (the number of partners in consideration set), width or breadth (the number of methods for searching information), and depth (the extent to which information is collected on each criteria and source).	Nijssen et al. (1999)
Information Acquisition by Evaluative Criteria	Extent of information collected for each evaluative criterion. The dimension of measurement is the same as the construct of utilization of information sources.	Hitt et al. (2000)
Organizational Inertia	Degree of organizational memory stressing the importance of cumulative experience and history (Gulati, 1995).	Li and Rowley (2002); Zollo et al. (2002)



Personal Inertia	Degree of habitual reliance on a previously success formula which comes from past work experience within function areas, even if this success formula is irrelevant to coming strategic decision (McGrath and Kelly, 1989).	Li and Rowley (2002); Zollo et al. (2002); Hodgkinson and Wright (2002)
Alliance Outcome	Degree of performance of alliance and relationship, since the achievement of objectives and satisfaction of partnership are both important (Saxton, 1997; Selnes and Sallis, 2003).	Saxton (1997); Zollo et al. (2002); Selnes and Sallis (2003)
Uncertainty of Decision Nature	Degree of intricacy of decision topic in technical and informational aspects, including rarity of occurrence, radicality of consequences, seriousness of consequences, diffusion of consequences, endurance of consequences, precursiveness, number of party involvements, diversity of party's function background, and openness to alternatives	Cray et al. (1991)

As for comprehensively measuring the extent of information collection, a multi-dimensional view proposed by Williams et al. (1988) was employed, including range, breadth and depth. Organization and personal inertia were measured based on emphasis of importance of cumulative experience proposed by Li and Rowley (2002) and Zollo et al. (2002), including past partnership outcome with the same partner, partner-specific experience with the same partner, task-specific experience with the same type of decision, and executives' past functional work experience. The result of collaboration concerns both the satisfaction in the process of cooperation and the performance of achieving collaborative objectives. The willingness of continuous cooperation would be rare because of conflict and hostility in the process of cooperation (Saxton, 1997). The scale of alliance outcome is comprised of indicators of perceptual alliance performance and satisfaction of partnership. Cray et al. (1991) proposed that the familiarity of the problem implies the degree of uncertainty. The scale of problem complexity proposed by Cray et al. (1991) is utilized.

3.2 Data Collection and Sampling Procedure

The major upstream and downstream activities of the supply chain are supply of raw material and collaborative design (Das and Teng, 1998), such as blanket orders or product development projects. Hence, our samples are selected from procurement and R&D departments of electrical and electronic manufacturing industries in Taiwan. For assessing face validity and content validity, short interviews with experts, procurement managers and R&D managers were carried out. A package with revised questionnaires and a prepaid

envelope was mailed to each executive who either administers long-term projects in the R&D department or the procurement department of 501 organizations sampled from the list of top 1000 Taiwan manufacturing companies in 2002, issued by CommonWealth magazine (a prominent Taiwan business magazine). For promoting the uniformity of responses, we clarified the definition of long-term relationships and asked respondents to choose a specific relationship in which they were currently involved or had recently ended. Of the 1,002 questionnaires sent out, 12 (6 firms) could not be delivered because of the businesses ceasing their operations.

To improve the response rate, we provided monetary incentives and conducted follow-up reminders via mail, e-mail and telephone. The final result was 93 returns for a 9.4% response rate. Forty-two responses came from procurement managers and the others from R&D managers. After scrutinizing returned questionnaires, 79 with completed and reasonable answers were useable. We systematically checked non-response bias and systematic response bias on the return date and department by number of employee, amount of assets and amount of capital. The results presented no significant differences, suggesting that these respondents can be pooled without any loss in generalizability. The details are shown in Table 2.

Table 2: Comparison for response bias

	Non-response bias		Time – response bias		Department – response bias	
	F-value	Sig.	F-value	Sig.	F-value	Sig.
Number of employees	1.79	0.18	1.59	0.21	0.41	0.53
Assets	0.13	0.72	0.88	0.35	0.91	0.34
Capital	0.02	0.88	1.96	0.17	2.58	0.11

$p \leq 0.05$.

The descriptive statistics of sample profile are shown in Table 3. Most respondents are processing vertical integrative collaboration. The age of cooperative project is below 6 years. Almost one half of cooperative projects are lasting less than 1 year. Most respondents are aged, large capital, many employees and great annual revenue, just like the profile of electrical and electronic manufacturing corporations in the list top 1000 manufactures.



Table 3: Demographics

Demographic	Category	Frequency (n=79)	Valid Percent
Cooperative Type	Vertical Integration	62	80.5%
	Horizontal Integration	15	19.5%
	missing	2	
Age of Cooperative Project	<=1	35	45.4%
	>1 & <= 2	20	26.0%
	> 2 & <= 3	13	16.9%
	> 3 & <= 6	9	11.7%
	missing	4	
Area of Major Task	Production/Procurement	32	41.6%
	R & D	45	58.4%
	missing	2	
Age of Company	> 2 & <=5	4	5.1%
	> 5 & <= 10	14	17.7%
	> 10 & <= 15	13	16.5%
	> 15	48	60.8%
Capital (NT million dollar)	> 30 & <= 80	1	1.3%
	> 80 & <= 500	9	11.4%
	> 500 & <= 1000	22	27.8%
	> 1000	47	59.5%
Number of Employee	> 21 & <= 50	1	1.3%
	> 50 & <= 200	7	8.9%
	> 200 & <= 1000	41	51.9%
	> 1000	30	38.0%
Annual Sales (NT million dollar)	> 5 & <= 20	1	1.3%
	> 20 & <=100	1	1.3%
	> 100 & <= 500	4	5.1%
	> 500 & <= 5000	47	59.5%
	> 5000	26	32.9%

4. Data Analysis and Results

4.1 Measurement Model

Confirmatory factor analysis was carried out using LISREL 8.50 to assess reliability and validity of reflective constructs, namely, alliance outcome. This process was not applied to the formative constructs as suggested by Hulland (1999).

Three items in the construct of alliance outcome were dropped based on correlation matrix verification. The reliability and convergent validity are all acceptable. Composite

reliability (0.94), average variance extracted (0.61), as well as the significant factor loadings of the remaining indicators (range from 0.60~0.84), all falls in the satisfactory range. The fit indices present acceptable construct validity except for NFI, which are a little below the acceptable level (Bentler, 1990), as shown in Table 4. The concise instrument of 10 indicators was employed for successive assessment.

Table 4: Goodness of fit indices – Alliance Outcome

	χ^2	d.f.	$\chi^2/d.f.$	SRMR	RMSEA	AGFI	NFI	CFI	IFI
Model	52.02	35	1.49	0.05	0.08	0.082	0.085	0.93	0.94
Acceptable levels	Not significant	--	< 3.0	0.05 ~ 0.08	0.05 ~ 0.08	>0.80	>0.90	>0.90	>0.90

4.2 Hypotheses Testing

Partial least square (PLS) method was applied to evaluate our research model because of small sample size and a mix of formative and reflective indicators (Chin, 1998). For assessing moderating effects, the procedure of combining PLS and product indicator approach proposed by Chin et al. (2003) was employed. We first analyzed the constrained model without any moderating effects, and then tested the full model with the moderator.

The result of the constrained model is presented in Figure 2. Only the positive association of information acquisition by evaluative criteria and alliance outcome is found to be significant (H1-2). The significant relationship between utilization of information sources and alliance outcome is contrary to our expectation. The explanatory power for alliance outcome is 11.6%.

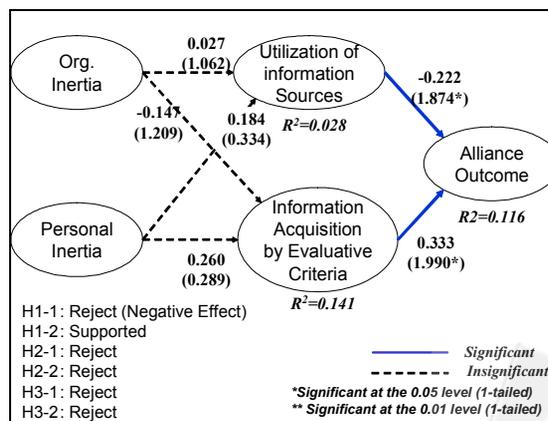


Figure 2: Parameters of constrained model without contingent factors

The result of full model with moderating effect is shown in Figure 3 and Table 5. All of the respective corollaries about moderating effects, except for H4-1 and H5-1, are supported. These evidences corroborate the substantial contingent influence of uncertainty on organizational partner selection behavior. The predictive powers for utilization of information acquisition by evaluative criteria, and alliance outcome are all greater than the constrained model, 18% and 22.6%, respectively.

The result of H4-1 is contrary to our expectation, but is significant. The negative influence of H4-1 indicates collecting information from several sources for an uncertain decision of partner selection negatively affects the alliance outcome more so than with a stable decision. The positive effect of H4-2 indicates collecting more information based on evaluative criteria for uncertain choice will more likely produce a positive alliance outcome than for a stable decision.

Uncertainty positively moderates the negative relations between organizational inertia and collection of information on evaluative criteria (H5-2). It shows that organizations sticking to inertia will still broaden the extent of collecting information for various criteria when they identify partner selection as an uncertain decision. Uncertainty also lessens the negative associations of personal inertia and information collection mechanism (H5-3 and H5-4) based on the positively effects. The results reveals that the decision makers with high personal inertia will collect more information from several sources and more information based on evaluative criteria when they think this decision is uncertain.

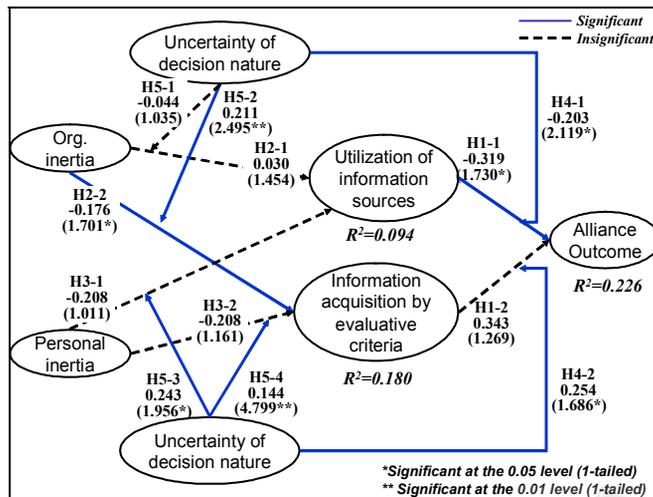


Figure 3: Parameters of full model: path coefficient and R² value



Table 5: Summary of model evaluation

Hypotheses		Supported
H1-1	Utilization of information sources is positively associated with alliance outcome.	Significant but inverse direction
H1-2	Information acquisition by evaluative criteria is positively associated with alliance outcome.	Supported
H2-1	Organizational inertia is negatively associated with utilization of information sources.	Rejected
H2-2	Organizational inertia is negatively associated with information acquisition by evaluative criteria.	Rejected
H3-1	Personal inertia is negatively associated with utilization of information sources.	Rejected
H3-2	Personal inertia is negatively associated with information acquisition by evaluative criteria.	Rejected
H4-1	Uncertainty of decision nature amplifies the positive association between utilization of information sources and alliance outcome, verse visa.	Significant but inverse direction
H4-2	Uncertainty of decision nature amplifies the positive association between utilization of information sources and alliance outcome, verse visa.	Supported
H5-1	Uncertainty of decision nature reduces the negative association between organizational inertia and utilization of information sources, verse visa.	Rejected
H5-2	Uncertainty of decision nature reduces the negative association between organizational inertia and information acquisition by evaluative criteria, verse visa.	Supported
H5-3	Uncertainty of decision nature reduces the negative association between personal inertia and utilization of information sources, verse visa.	Supported
H5-4	Uncertainty of decision nature reduces the negative association between personal inertia and information acquisition by evaluative criteria, verse visa.	Supported

4.3 The Moderating Effect of Uncertainty of Decision Nature

For investigating the detailed moderating effect, we drew on graphical depictions for interaction, following the procedures proposed by Valle and Witt (2001), as presented in Figures 4~8. These plots are for presentation, rather than for examining statistical significance of interaction. Figure 4 shows the effect of organizational inertia on information acquisition by evaluative criteria under varying degrees of problem complexity. Among firms with the same level of organizational inertia, the one, which perceives high uncertainty, could collect much more information on evaluative criteria.

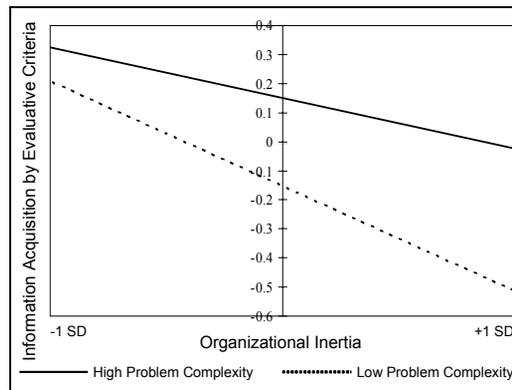


Figure 4: Plot of information acquisition by evaluative criteria regressed on organizational inertia and uncertainty

In Figure 5, the effect of personal inertia on the utilization of information sources under varying degrees of problem complexity is presented. The positive relationship in a high uncertainty setting shows that the more decision makers rely on experience, the more they will collect information from various sources. However, among firms with the same level of personal inertia, those who perceive high uncertainty generally tend to collect much less information from fewer sources.

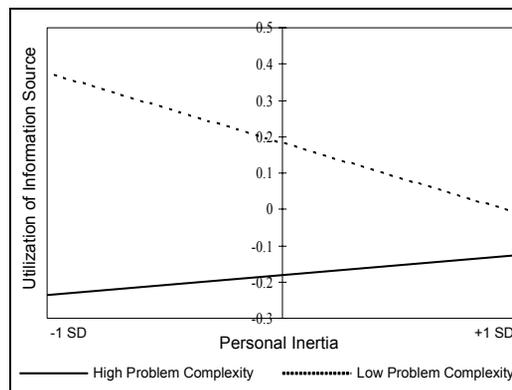


Figure 5: Plot of utilization of information sources regressed on personal inertia and uncertainty

The effect of personal inertia on information acquisition by evaluative criteria under varying degrees of problem complexity is shown in Figure 6. Maintaining the same level of decision makers' inertia, a firm, which perceives high uncertainty, inclines toward collecting much more information on evaluative criteria.

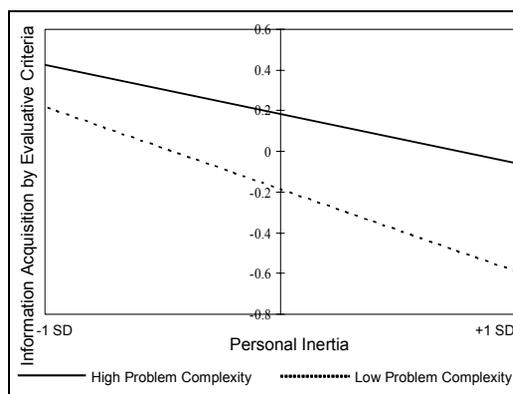


Figure 6: Plot of information acquisition by evaluative criteria regressed on personal inertia and uncertainty

Figure 7 shows how the utilization of information sources affects alliance outcome under varying degrees of problem complexity. Possessing the same extent of information from various sources, firms which perceive high uncertainty tend to engender better alliance outcome, even if more information from several sources lower alliance outcome.

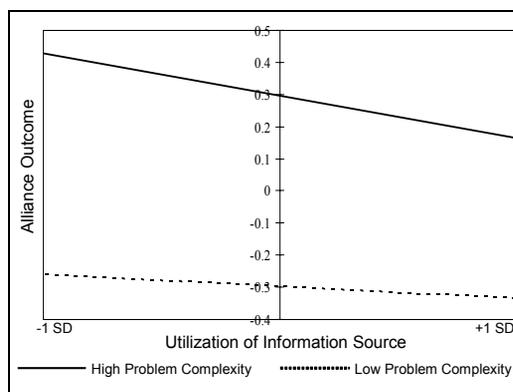


Figure 7: Plot of alliance outcome regressed on utilization of information sources and the effect of uncertainty

The effect of information acquisition by evaluative criteria on alliance outcome under varying degrees of problem complexity is shown in Figure 8. In conditions with the same extent of information on evaluative criteria, firms, which perceive high problem complexities, tend to result in better alliance outcome.

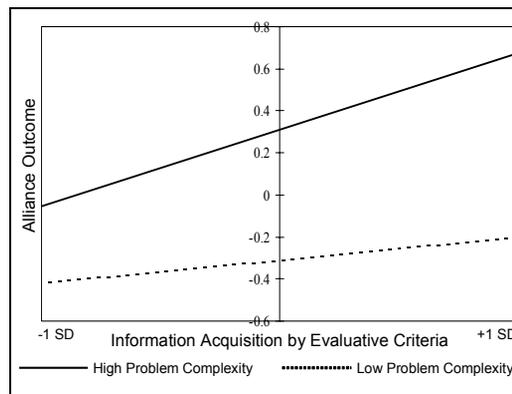


Figure 8: Plot of alliance outcome regressed on information acquisition by evaluative criteria and uncertainty

Consequently, firms recognizing partner selection as a highly complex decision usually enhance information collection on evaluative criteria, in turn, leading to better alliance outcome. However, firms recognizing partner selection as a highly complex decision prefer identifying decision makers' habits and experience as major information sources, in turn, worsening alliance outcome. It is interesting that organizational behaviors on information sources and evaluative criteria are inverted in our study.

5. Discussion

Some recent studies stress the critical role of partner selection for successful alliances and how to collect information based on evaluative criteria, e.g. Hitt et al. (2000) and Saxton (1997). We advance their conclusion by considering organizational and personal habitual behavior on information collection additionally. Moreover, we look into the contingent influence on partner selection. Figure 9 and Figure 10 summarize our results. Each grid represents different levels of interaction of organizational/personal inertia and uncertainty of decision nature. A comparative degree of utilization of information sources, information acquisition on evaluative criteria and alliance outcome are presented in each grid.

Figure 9 shows the results of information collection and alliance outcome in different contexts determined by interaction of organizational inertia and uncertainty. When facing low problem uncertainty, firms with high organizational inertia tend to collect the least information on evaluative criteria, in turn leading to the worst alliance outcome. When facing a high problem uncertainty, firms with less organizational inertia perform the best, since they collect the most information collected on evaluative criteria. In the setting of the

same level of problem uncertainty, firms with less organizational inertia perform better than those with high organizational inertia. Consequently, firms should escape from organizational inertia and devote time to collecting lots of information based on evaluative criteria, so as to select optimal partners and lead to the best alliance outcome under a high problem uncertainty setting.

		Uncertainty (Problem Complexity)	
		High Uncertainty	Low Uncertainty
Organizational Inertia	H	<ul style="list-style-type: none"> Utilization of information sources: <i>Insignificant</i> Information acquisition by evaluative criteria: <i>Less but more than "low org. inertia and low uncertainty"</i> <p>Alliance outcome: Better</p>	<ul style="list-style-type: none"> Utilization of information sources: <i>Insignificant</i> Information acquisition by evaluative criteria: <i>Least</i> <p>Alliance outcome: Worst</p>
	L	<ul style="list-style-type: none"> Utilization of information sources: <i>Insignificant</i> Information acquisition by evaluative criteria: <i>Most</i> <p>Alliance outcome: Best ★</p>	<ul style="list-style-type: none"> Utilization of information sources: <i>Insignificant</i> Information acquisition by evaluative criteria: <i>Less</i> <p>Alliance outcome: Worse</p>

Figure 9: Comparison of information collection and alliance outcome by linking the interactions of organizational inertia, information collection and uncertainty

Figure 10 describes the results of information collection and alliance outcome in different contexts determined by interaction of personal inertia and uncertainty. In cases of high uncertainty, firms with low personal inertia would collect less information from fewer sources and more information based on evaluative criteria. From this collected information, firms could select the appropriate partner to engender the best alliance outcome. In cases of low uncertainty, both alliance outcomes are negative, no matter how firms rely on personal inertia for making decision. Consequently, firms should try to neutralize the impact of personal inertia and pay more attention on information collection for evaluative criteria in order to pursue a better alliance outcome.



		<i>Uncertainty (Problem Complexity)</i>	
		<i>High Uncertainty</i>	<i>Low Uncertainty</i>
<i>H</i>	<ul style="list-style-type: none"> • Utilization of information sources: <i>Less</i> • Information acquisition by evaluative criteria: <i>Fair</i> <p style="text-align: center;">Alliance outcome: <i>Fair</i></p>	<ul style="list-style-type: none"> • Utilization of information sources: <i>Less but more than "high personal inertia and high uncertainty"</i> • Information acquisition by evaluative criteria: <i>Least</i> <p style="text-align: center;">Alliance outcome: <i>Worse</i></p>	
	<i>L</i>	<ul style="list-style-type: none"> • Utilization of information sources: <i>Least</i> • Information acquisition by evaluative criteria: <i>Most</i> <p style="text-align: center;">Alliance outcome: <i>Best</i> ★</p>	<ul style="list-style-type: none"> • Utilization of information sources: <i>Most</i> • Information acquisition by evaluative criteria: <i>Fair</i> <p style="text-align: center;">Alliance outcome: <i>Worse</i></p>
		<i>Personal Inertia</i>	

Figure 10: Comparison of information collection and alliance outcome by linking the interactions of personal inertia, information collection and uncertainty

Two findings are contradictory to our expectation. The first is the positive relation between personal inertia and utilization of information sources in a high problem uncertainty setting, as shown in Figure 5. As opposed to bounded rationality, indicating that executives persist involuntarily in their methods used based on experience or habits (McGrath and Kelly, 1989), decision makers with high inertia tend to broaden information sources when they detect highly uncertain problems. This plausible reason is rooted in that the more the executives are familiar with an alliance or specific partners, the more they are acquainted with how to collect information from various channels based on their assessment of corresponding costs and benefits (Morrison and Vancouver, 2000). Secondly, utilization of information sources is negatively associated with alliance outcome. Following resource dependence perspective and rationality of decision-making, collecting more information from diverse sources will positively influence the selection of satisfactory partners. This may well be the effect of information overload (Lee and Lee, 2004) or contradictive information from distinct sources. The diverse information sources interfere with judgment of partner selection and then have a negative impact on the alliance outcome. However, these two findings are worth studying further.

Apart from the contradictory findings, two important results open up avenues of intricacy in inertia and information collection mechanism under various contingent contexts. First of all, uncertainty of decision determines the threshold of information collection, by which firms could produce desired alliance outcome at minimum searching cost. Firms perceiving high uncertainty should concentrate on collecting more information for a variety of evaluative criteria and less information from limited sources. In the setting of low uncertainty, the probability of selecting appropriate partner for better alliance

outcome is not enhanced much by broadening extent of information collection, as shown in Figure 8. Hence, firms could spend less time and cost on comprehensively searching information. Secondly, both organizational and personal inertia seriously diminish alliance outcome by restraining information collection behavior. Particularly, firms perceiving high uncertainty perform rational behavior, which resists existing inertia to enrich information collection on evaluative criteria and lessen utilization of information sources.

6. Conclusion

6.1 Academic Implication and Future Research

This study not only supports relation between information acquisition on evaluative criteria and alliance outcome based on resource dependence perspective, but also extends its applicability to contingent contexts derived from amendment for rationality of decision, e.g. Eisenhardt (1989) and Priem et al. (1995). Information collection behaviors could be adjusted by uncertainty for choosing optimal partners at minimum search cost, since the marginal value of information is greater in the setting of high uncertainty than of low uncertainty. Firms facing high uncertainty of decision generally enlarge the extent of information collected on evaluative criteria, whatever the degree of organizational and personal inertia, in turn resulting in better alliance outcome. This issue could be investigated in future.

Contrary to the research advocating the reliability of inertia, e.g. Gulati and Gargiulo (1999) and Zollo et al. (2002), our finding supports the unfavorable effect of organizational inertia on information acquisition on evaluative criteria in contingent model. It is interesting that firms with high personal inertia will collect more information from more information sources when they perceive high uncertainty. This supposition is opened up to examine further.

6.2 Managerial Implications

Instead of discussion on evaluative criteria, we stress the importance of information amount, which should be enough for choosing the most suitable partners, and also stress inertia, which could affect information collection behavior.

Some suggestions can be drawn from our results. First, firms should get rid of the constraint of organizational inertia and the decision maker's inertia, no matter the level of uncertainty and then utilize the information collection mechanism. In this information mechanism, firms could narrow down the scope of information sources and broaden

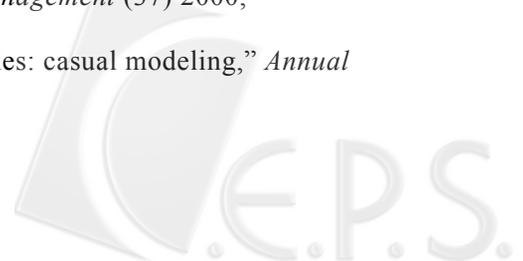
information gathered by evaluative criteria, especially in dealing with highly uncertain alliances. More importantly, although the one and only way to reduce uncertainty is to collect sufficient information, firms should also be concerned whether the effort spent to collect information in different contexts is comparable to the benefits gained. The improvement of information collection on alliance outcome is not great in low uncertainty, since the increased value of information is higher in high problem complexity than in low problem complexity. After assessing the degree of uncertainty and counteracting inertia, firms could determine the exact extent of “sufficient information” and then select optimal partners at minimum searching cost.

6.3 Limitations

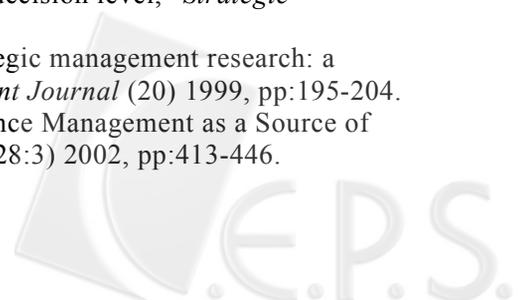
Since this study is conducted in the electrical and electronic industries, it might inhibit the generalizability of our results to other industries. Our result revealing the negative effect of inertia on information collection is in opposition to some research, e.g. Gulati and Gargiulo (1999) and Zollo et al. (2002). The possible reason is rooted in the innate uncertainty of the electrical and electronic industries. Future research should examine whether the effect on inertia might vary with relatively stable industries and then make a comparison. The small sample size may result from the difficulty of accessing right contact persons by self-administrative mail survey. R^2 of utilization of alliance outcome and information acquisition by evaluative criteria are 22.6% and 18%. Especially, R^2 of information source is only 9.4%. The low explained variance of endogenous variables indicates that some considerable determinants of information collection behavior should be included except for organizational and personal inertia. Future studies should investigate more excluded key antecedents and look into the association among information collection behavior and alliance performance. Finally, we assume that selected firms are all willing to join in this strategic alliance. In fact, these selected firms may reject to participate. As a result, firms could cooperate with their second choice. This may be the root of difficulties for exploring the relationship between the good partner and alliance performance.

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