Managing Alliance Relationship in High Technology Industries

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Abstract

The purpose of this study is to examine the relationships between strategic alliance success factors and business performances by using Taiwan high technology industries.This article investigates financial performance responses to strategic alliances in Taiwan's high-tech industry from 2004-2008. This study try to develop evaluation models for high-tech industry through SEM Model to provide an integrated framework that conceptualizes multifaceted antecedents pertaining to business performance of Taiwan's high-tech industry relation to strategic alliances. The results indicate that (1) the degree of commitment displayed by the alliance partner influences positively a company's business performance (2) inter-firm trust is a source of confidence in partner cooperation and in successful strategic alliances,it allows the alliance to overcome critical moments in its development and lead to sound business performance. (3) control, capabilities, and compatibility are the key sources of confidence in partner cooperation.

Keywords: Financial Performance; Partnership Relationship Management, Strategic Alliances ; High-Tech Industry

1. INTRODUCTION

A firm's ability to manage its alliances has been highlighted as a dynamic capability, Learning-by-doing is the first step for building an alliance capability (Teece et al., 1997). Thus, more alliance experience tends to promote firms to achieve competitive advantage, have superior performance, gain growth, and receive sustainability. Emden et al. (2005) indicated that repeated engagements in strategic alliances allow the firm to create codified routines, policies and procedures as well as tacit knowledge with respect to the entire range of alliance management, beginning with partner selection and alliance formation to alliance management and finally alliance termination. On the other hand, a firm's knowledge of alliance management may be embodied in manuals, databases, diagnostic tools, and simulations that codify the key insights gained through reflection on past alliance experiences and should contribute to achieving a competitive advantage through allowing the firm to manage a larger number of alliances productively. De Man (2004) indicated that alliance experience refers to the extent to which a firm acquires, analyzes, and appropriates experiential learning throughout the organization. For example, Luft et al.(1979) found that more experienced health care providers of complex procedures like heart surgeries performed significantly better in terms of a lower mortality rate than less experienced providers. Another example, high-technology start-ups with greater alliance experience tended to be more innovative (Shan et al., 1994).

Alliance capabilities are expected to mediate between a firm's alliance experience and its alliance performance (Heimeriks and Duysters, 2007). De Man (2004) indicated that alliance management tools include standardized procedures for alliances, like checklists for partner selection, alliance evaluation tools or alliance databases. However, alliance management capability stem primarily from two factors: (1) the different types of partners involved in the firm's alliances and (2) the different types of knowledge being transferred through the alliances. Heimeriks and Duysters (2007) indicated that alliance capability consists of learning mechanisms, which can increase a firm's ability to perform repeatable patterns of action with respect to, for instance, identifying partners, initiating relationships or restructuring individual alliances or alliance portfolios. McCutchen et al. (2008) indicated that firms generally face the challenge of managing different types of alliances that are likely to make differential demands on the firm's alliance management capability. The two core elements of alliance capability, alliance experience and mechanisms for alliance management, which appear to becoming the dominant organizational form (Emden et al., 2005). Therefore, firms have exploited alliance experience in

order to improve their business practices and operations and develop their expertises via identifying good partners, negotiation, alliance formation, interfirm control, knowledge acquisition, and alliance modification. However, a firm's alliance capability can be defined as its ability to internalize alliance management knowledge. Learning mechanisms and routines are highly interlinked concepts. Learning mechanisms are used to integrate alliance-related knowledge into the firm, which enables them to create routines for managing alliances.

Our purpose here, therefore, is to propose an integrated framework that evaluates prospective alliance performance through an analysis of the partner firms and the alliance conditions, drawing upon and integrating the main approaches in the strategy literature—Structure of strategic alliances, which includes comparisons of governance structures in equity-based and contract-based alliances and formation of strategic alliances. Investigate whether different Strategic alliances have differential effects on various dimensions of Taiwan's High-tech Industry business performance. The concept model we test is illustrated in figure 1.

Figure 1   Concept Model: The Influence of Partner Relationship Management of Strategic Alliance on Financial Performance
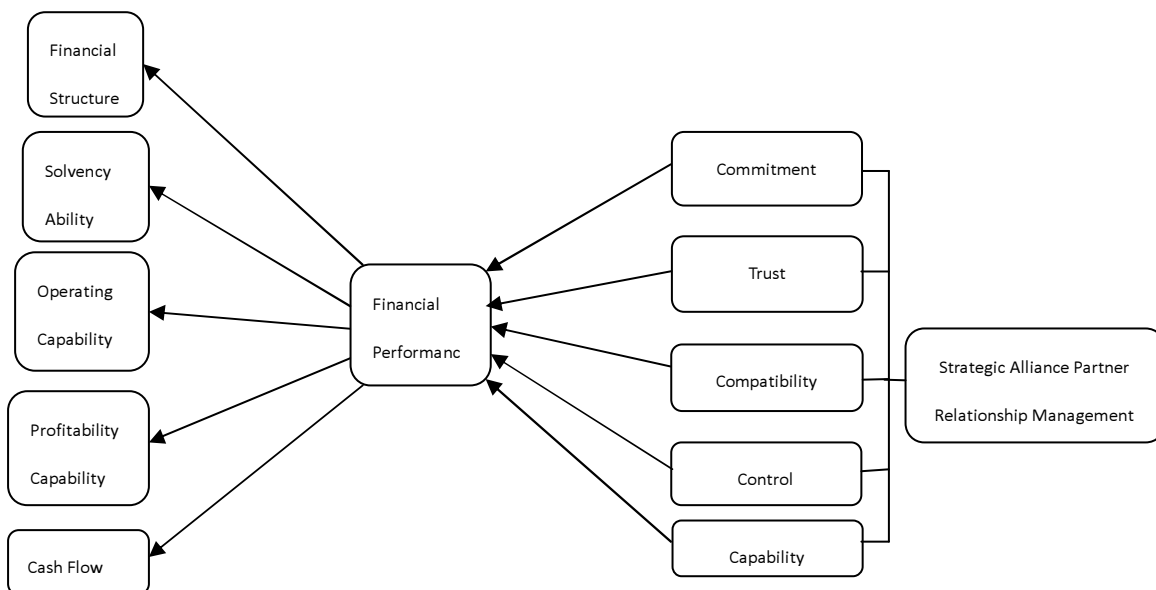
2. LITERATURE REVIEW

The Partnership Relationship Management of Strategic Alliance

In the alliance context, Partner Relationship Management (PRM) is above understanding the needs of one's business partners and satisfying those needs to the best of one's ability while building trust between the two parties. Hagen (2002) indicated that strategic alliance research identifies five Cs (compatibility, capability, commitment, control and trust) are perceived as important determinants of alliance continuity in choosing appropriate partners, which as criteria for successful pre-selection of alliance partners. These factors are perceived as important determinants of alliance continuity. In this study, characteristics of strategic alliance partners as following factors:

（1）**Commitment:** Commitment has been described as a pledge by alliance members to undertake certain actions that will facilitate the attainment of the alliance's strategic goals (Shamdasani & Seth, 1995). Measures for commitment were adapted from Moore and Cunningham (1999).

（2）**Trust:** the trust generated by partners, in part due to the efforts of both with respect to the maintenance of personal contacts among the managers allows the alliance to overcome certain critical moments in its development (García-Canal et al. 2002)

（3）**Compatibility:** It states that each interpersonal behavior invites certain responses of another interaction. The behavior and the response it invites are said to be complementary (Horowitz, Dryer, & Krasnoperova, 1997). Measures for compatibility were adapted from Moore and Cunningham (1999).

（4）**Control:** control is a key source of confidence in partner cooperation, therefore organizations in alliances tend to be more confident about partner cooperation when they feel they have adequate level of control over their partners (Medina-Muñoz, Medina-Muñoz, and Garcia-Falcon, 2003).

（5）**Capability:** the quality of being able to perform; a quality that permits or facilitates achievement or accomplishment. This was measured by the level of complimentarily as adapted from Faulkner (1995).

■　**Commitment**

Morgan and Hunt (1994) indicated that commitment is an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it, mutual commitment and the resulting norms of reciprocity hold the relationship together, and the committed party believes the relationship is worth working on to ensure that it endures indefinitely. This

interdependence process occurring between commitment and satisfaction support a growing and never-ending survival of the strategic alliance. Hagen (2002) indicated that commitment is the keystone to alliance success, and while the partners must offer complementary objectives and skills, both partners must believe that they can trust each other and that mutual commitment is a reality, and also employee and management satisfaction resulting from the favorable performance of the organizations and the alliance will reinforce their commitment further. Ohmae (1989) argued that alliances are like marriage—they only work when both partners do." if partners involved in an alliance demonstrate mutual commitment, the venture will develop based on the principle of fair exchange (Lane & Beamish, 1990). If partners do not trust each other and are not committed to the alliance, technology transfer is greatly inhibited (Morgan and Hunt, 1994). The development of trust and commitment in strategic alliances involves a complex interplay between the dimensions of trust and the dimensions of commitment within the individual alliance partner firm and across the alliance dyad. Therefore, from the above definition of commitment, the following hypothesis is proposed:

Hypothesis 1: The degree of commitment displayed by the alliance partner influences positively a company's (1) assessment of the alliance performance, and (2) satisfaction with the alliance.

■ **Trust**

Trust has been seen as critical in organizational relationships (Perry, Cavaye, & Coote, 2002). From the perspective of the individual partner firm, trust provides a foundation for commitment. There is evidence which suggests that firms entering strategic alliances are potentially vulnerable to the opportunistic behavior of their partners (Hamel, Doz, & Prahalad, 1989). The trust dimensions, benevolence and credibility, are highly correlated and develop in parallel. Das and Teng (1998) argued that the trust dimensions appear to contribute significantly to the development of commitment, which inter-firm trust is a source of confidence in partner cooperation and in strategic alliances, firm managers develop beliefs about their partner's reliability and delivery on expectations in alliance activities, the credibility side of trust.

Thus for the alliance firm, trust —both credibility and benevolence —of the partner builds and leads the firm to commitment toward the alliance. Hence García-Canal et al. (2002) argued that The picture of trust and commitment becomes more complex and dynamic when viewed in terms of interactions and responses of partners to each other in the relationship, the trust generated by partners, in part due to the efforts of both with respect to the maintenance of personal contacts among the

managers allows the alliance to overcome certain critical moments in its development. Therefore Hitt et al. (1996) argued that the building of trust and commitment depends on the partners' signaling to each other and the interpretation and response to this signaling in the relationship and partners in the alliance can signal trust of each other, thereby setting in motion a positive cycle.

While on the other hand, if an organization has developed a strong reputation in cooperative relationships, firm managers develop beliefs about their partner's reliability and delivery on expectations in alliance activities, the credibility side of trust. Therefore, the following hypothesis is proposed:

Hypothesis2: The degree of trust displayed by the alliance partner influences positively a company's (1) assessment of the alliance performance, and (2) satisfaction with the alliance.

■ **Compatibility**

Strategic alliance compatibility is the major power to drive the direction of corporate co-branding value (Kanter, 1994), Kanter observed that the degree of compatibility among partner firms has been found to be an important predictor of the success or failure of joint ventures. Compatibility covers an array of issues including broad historical, philosophical, and strategic grounds, values and principles, and hopes for the future. Hagen (2002) indicated that the degree of compatibility among partner firms has been found to be an important predictor of the success or failure of joint ventures, an alliance partner has complementary goals and shares similar orientations that facilitate coordination of alliance activities and execution of alliance strategies. Potential partner firms might consider informally working together on a small project to assess compatibility and mutual trust prior to entering into a strategic alliance. Therefore, the following hypothesis is proposed:

Hypothesis3: The degree of compatibility displayed by the alliance partner influences positively a company's (1) assessment of the alliance performance, and (2) satisfaction with the alliance.

■ **Control**

Gulati (1995) argued that control is a key source of confidence in partner cooperation. Medcof (1997) indicated that organizations in alliances tend to be more confident about partner cooperation when they feel they have adequate level of control over their partners. Trust and control are inextricably interlinked with risk in strategic alliances, while strategic alliances present new opportunities with risks that can be shared. They often limit the discretion, control, and profit potential of partners. At the same time, the very control that is supposed to enhance partner

confidence in the alliance may stifle autonomy and flexibility of alliance members, while demanding managerial attention and other resources that might be directed toward the firm's mainstream activities. Howarth et al. (1995) argue that strategic alliances also present costs and risks to partner organizations because of their organizational form, emphasis on the control system structure allows the partners to assess what controls are necessary relative to the strategy for the relationship, independent from their own separate control systems. For example, the alliance control process must take into account the shared product design and manufacturing responsibilities. They associate these with organization's loss of autonomy and flexibility accompanied with possible relegation to an inferior position in the alliance. Therefore, the following hypothesis is proposed:

Hypothesis 4: The degree of control exercised by the focal firm on its alliance partner influences positively a company's (1) assessment of the alliance performance, and (2) satisfaction with the alliance.

■ **Capability**

Ireland et al. (2002) defined that alliance management capability as a firm's ability to effectively manage multiple alliances implies that entrepreneurial ventures may accrue alliance experience through entering several alliances early on, in a more or less simultaneous fashion. Building on alliance management capability can be a source of competitive advantage. Repeated alliance engagements over time appear to contribute to the build-up of an alliance management capability, which the firm can then leverage to enhance the performance in subsequent alliances (Shamdasani & Seth, 1995). If the capability to manage alliances is heterogeneously distributed across firms and difficult to imitate, a firm's alliance management capability has the potential to create a firm-level competitive advantage (Ireland et al., 2002). Hitt et al. (1996) further see skills and knowledge as the primary base of an organization's capabilities, A high-technology venture's alliance experience moderates the relationship between strategic alliances and new product development in such a fashion that a more experienced firm is able to manage a larger number of alliances which are often developed in specific functional areas such as manufacturing, R&D, marketing and advertising. Therefore, repeated engagements in strategic alliances allow the firm to create codified routines, policies and procedures as well as tacit knowledge with respect to the entire range of alliance management, beginning with partner selection and alliance formation to alliance management and finally alliance termination. Therefore, the following hypotheses are proposed:

Hypothesis 5: The level of capabilities displayed by the alliance partner influences positively a focal company's (1) assessment of the alliance performance, and (2) satisfaction with the alliance.

3. RESEARCH METHODOLOGY

3.1 Sample and Data Sources

Data have been collected from 152 high technology firms in Taiwan. The industry and involves large and well-known high technology companies in industries such as Integrated circuits, PC/Peripherals, Optoelectronics , Telecommunication, Precision machinery, and Biotechnology . After that a large-scale questionnaires survey was administered to secure more information from either CEO , top managers or HR professionals. Given that a comprehensive questionnaire such as this one requires much time to answer, most of the samples were approached through acquaintants.

The sample of firms for this study was drawn from the Taiwan *CommonWealth Magazine Top 1000 Enterprises* list of largest Taiwan high technology companies. In-depth interviews were performed on Taiwanese high technology companies to develop the research instruments. After that a large-scale questionnaires survey was administered to secure more information from CEO or top managers. Given that a comprehensive questionnaire such as this one requires much time to answer, most of the samples were approached through acquaintants. There are more than 500 Taiwan high technology companies in the database. After removing some companies with some missing financial numbers, the remaining number of samples in the final data set for analysis is 152, across 6 different high technology industries (Integrated Circuits, Computers and Peripherals, Telecommunications, Optoelectronics, Precision Machinery and Biotechnology).

Table 1   Sample Distribution of Taiwan's High-Tech Companies

| Industry	Samples of Companies
Integrated circuits	42
PC/Peripherals	52
Telecommunication	34
Optoelectronics	7
Precision machinery	12
Biotechnology	5
Total Samples	**152**

3.2 Variables and Measures

● *Dependent Variable: Financial Performance*

. In this research, the financial performance measures of business performance include (1) financial structure, (2) solvency, (3) operating capability, (4) profitability capability, and (5) cash flow.

Table 2 Measures of Business Performance

variables	Indicator	Measures	Scale
Business performance	Financial performance	(1) financial structure.	Financial ratio
		(2) solvency	
		(3) operating capability	
		(4) profitability capability	
		(5) cash flow	

Figure 2. Financial Performance
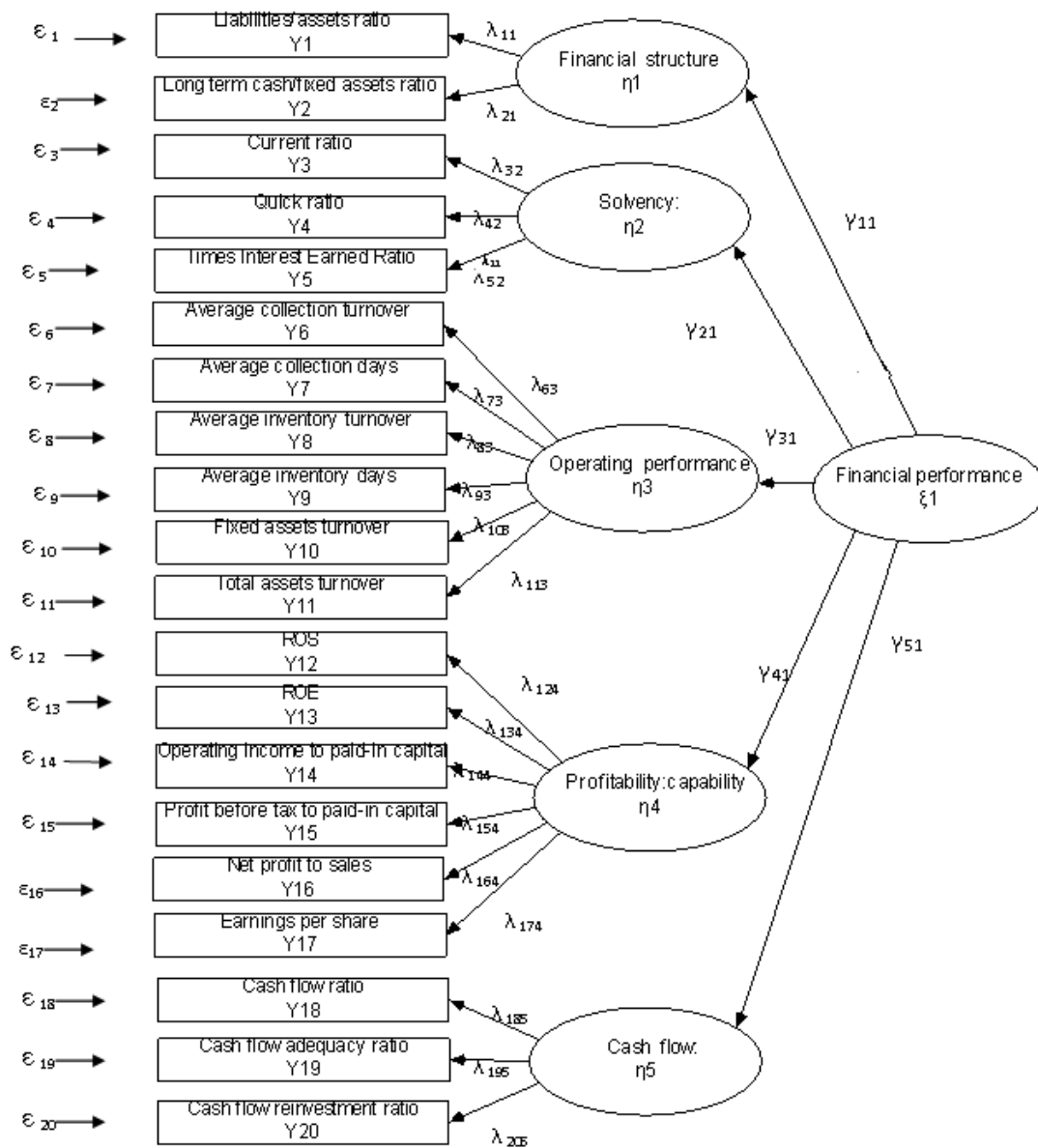
The structural equations of the model take the following form:

$Y_1=\lambda_{11}\eta_1+\varepsilon_1$	$Y_6=\lambda_{63}\eta_3+\varepsilon_6$	$Y_{11}=\lambda_{113}\eta_3+\varepsilon_{11}$	$Y_{16}=\lambda_{164}\eta_4+\varepsilon_{16}$
$Y_2=\lambda_{21}\eta_1+\varepsilon_2$	$Y_7=\lambda_{73}\eta_3+\varepsilon_7$	$Y_{12}=\lambda_{124}\eta_4+\varepsilon_{12}$	$Y_{17}=\lambda_{174}\eta_4+\varepsilon_{17}$
$Y_3=\lambda_{32}\eta_2+\varepsilon_3$	$Y_8=\lambda_{83}\eta_3+\varepsilon_8$	$Y_{13}=\lambda_{134}\eta_4+\varepsilon_{13}$	$Y_{18}=\lambda_{185}\eta_5+\varepsilon_{18}$
$Y_4=\lambda_{42}\eta_2+\varepsilon_4$	$Y_9=\lambda_{93}\eta_3+\varepsilon_9$	$Y_{14}=\lambda_{144}\eta_4+\varepsilon_{14}$	$Y_{19}=\lambda_{195}\eta_5+\varepsilon_{19}$
$Y_5=\lambda_{52}\eta_2+\varepsilon_5$	$Y_{10}=\lambda_{103}\eta_3+\varepsilon_{10}$	$Y_{15}=\lambda_{154}\eta_4+\varepsilon_{15}$	$Y_{20}=\lambda_{205}\eta_5+\varepsilon_{20}$

where ,

Financial performance= f (financial structure, solvency, operating capability, profitability capability, cash flow)

● *Independent Variables:*

Measures of Strategic Alliance Partner Relationship Management

The Strategic alliance partner relationship management factors view constructs use reflective scales developed by Morgan and Hunt (1994), having five indicates including 1.commitment 2.trust 3.compatibility 4.control 5. Capability; Commitment refers to follow contract and keep promise and build long term relationship with reciprocity. Trust relationship refers to alliance partners have highly mutual trust, control and alliance partners have good communication and cooperation skills. Compatibility refers to highly complementary and mutual respect and support. Capability refers to leader has capability to enhance alliance efficiency and leader has capability to develop the explicit regulation for alliance organization. Measures are explained as Table 3.

4. RESULTS

4.1 The SEM Results for Financial Performance

In Figure3, the SEM results for financial performance, all of the path coefficients are statistically significant. The following path model output reports the overall model coefficients for the major financial performance model. Table 4 and Table 5 shows that goodness-of-fit statistics for The Financial Performance. The signs of the parameter estimates are consistent with the hypothesized relationships among the latent variables. The goodness-of-fit statistics indicate a good fitting for our final model. Although the X^2 value is significant (p =0.089). The X^2/df ratio (X^2/df = 2.271) indicates a good fitting between the observed and reproduced covariance matrices. Of the measurement model of Financial Performance, RMSEA=0.085 which is lower than 0.05 good fit, NFI(0.987), CFI(0.996), RFI(0.978), IFI(0.994),

TLI(0.986)　which are all higher than 0.9 (Bentler & Bonnett,1980）. Loading factors of Financial Performance are all over 0.5, which means each loading factors of measurement index are all significant. Composite reliability of Financial structure, Solvency ability, Operating performance, Profitability capability, and Cash flow are 0.716, 0.854 and 0.870, 0.883, and 0.770 these two factors are all higher than 0.6. In addition, average variances extracted of these 5 factors are 0.507, 0.529 , 0.571, 0.545, and 0.512 which are higher than 0.5. Therefore, due to the data analysis, convergent validity of Financial structure scale belongs to acceptable range. Table 4 are first-order confirmatory factor analysis of The Financial performance.

Table 3.　Measures of Strategic Alliance Partner Relationship Management

variables	Indicator	Measures	Scale
partner relationship	1. Commitment:	(1)follow contract and keep promise。 (2)build long term relationship with reciprocity	7 point Likert scale
	2. Trust:	(1)alliance partners have highly mutual trust。 (2) alliance partners have good communication and cooperation skills。	
	3.Compatibility:	(1) highly complementary (2) mutual respect and support	
	4. Control:	(1) leader has capability to coordinate resources (2) leader has capability to control administrative and operational risk	
	5. Capability:	(1)leader has capability to enhance alliance efficiency (2) leader has capability to develop the explicit regulation for alliance organization	

　　All these outputs highlight the following facts about the above major model: First, the SEM Results for Financial Performance was able to estimate the major model without encountering any warnings. Second, none of the error variances are negative and the same applies to the variances of the latent variables. Third, the vast majority of the parameter estimates are significantly different from zero (as indicated by t-values greater than 1.96).

　　Fourth, the signs of the parameter estimates are consistent with the hypothesized relationships among the latent variables

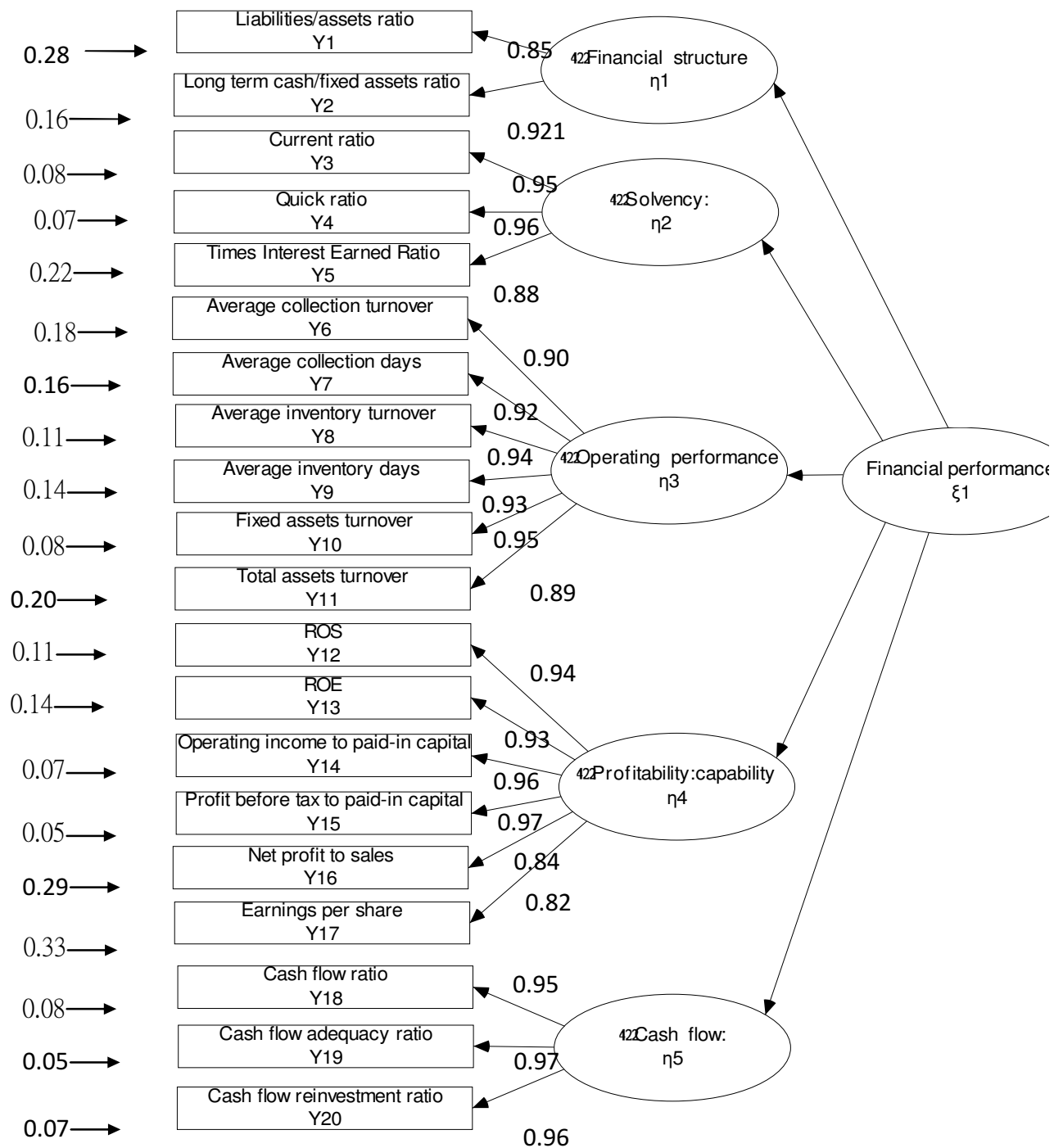Figure 3 The SEM Results for Financial Performance

Table 4. The Constructs and Their Indicators for Financial Performance SEM
Model.

Variables			Loading Factor λ	Measurement Errorε	CR	AVE
Financial structure					0.716	0.507
	Y1	*Liabilities/assets ratio (%)*	0.85	0.28		
	Y2	*Long term cash/fixed assets ratio*	0.92	0.16		
Solvency ability					0.854	0.529
	Y3	*Current ratio (%)*	0.95	0.08		
	Y4	*Quick ratio (%)*	0.96	0.07		
	Y5	*Times Interest Earned Ratio*	0.88	0.22		
Operating performance					0.870	0.571
	Y6	*Average collection turnover*	0.90	0.18		
	Y7	*Average collection days*	0.92	0.16		
	Y8	*Average inventory turnover*	0.94	0.11		
	Y9	*Average inventory days*	0.93	0.14		
	Y10	*Fixed assets turnover*	0.95	0.08		
	Y11	*Total assets turnover*	0.89	0.20		
	Y5	*Times Interest Earned Ratio*	0.88	0.22		
Profitability capability					0.883	0.545
	Y12	*ROS: Return on total assets*	0.94	0.11		
	Y13	*ROE: Return on shareholders' equity*	0.93	0.14		
	Y14	*Operating income to paid-in capital (%)*	0.96	0.07		
	Y15	*Profit before tax to paid-in capital*	0.97	0.05		
	Y16	*Net profit to sales (%)*	0.84	0.29		
	Y17	*Earnings per share (NTD)*	0.82	0.33		
Cash flow					0.770	0.512
	Y18	*Cash flow ratio (%)*	0.95	0.08		
	Y19	*Cash flow adequacy ratio*	0.97	0.05		
	Y20	*Cash flow reinvestment ratio (%)*	0.96	0.07		

Table 5. Goodness-of-fits Satistics for the Financial Performance SEM Model.

Goodness-of-fit statistics	AMOS model
χ^2	26.834
df	13
p-value	0.085
χ^2/df	2.064
CFI	0.996
NFI	0.987
RFI	0.978
IFI	0.994
TLI	0.986
RMSEA	0.052

5. DISSCUSSIONS

The Influence of Partner Relationship Management of Strategic Alliance on Business Performance

Table 6 shows the standardized regression weights and p-value. It is evident that the degree of commitment displayed by the alliance partner influences positively a company's business performance (Hypothesis 1).The degree of commitment regresses significantly positive toward business performance (standardized regression weight 0.416, p = 0.004). Alliances only work when both partners do." Commitment has been described as a pledge by alliance members to undertake certain actions that will facilitate the attainment of the alliance's strategic goals (Shamdasani & Seth, 1995). Therefore, the result of SEM Model supports Hypothesis 1.

It is evident that the degree of trust displayed by the alliance partner influences positively a company's business performance(Hypothesis 2). The standardized regression weight for trust is 0.242 and p = 0.002, regresses significantly positive toward business performance. Das and Teng (1998) indicate that inter-firm trust is a source of confidence in partner cooperation and in successful strategic alliances,it allows the alliance to overcome critical moments in its development and lead to sound business performance. Therefore, the result of SEM Model supports Hypothesis 2

It is evident that the degree of compatibility displayed by the alliance partner influences positively a company's business performance (Hypothesis 3). The standardized regression weight for compatibility is 0.529 and p = 0.005, regresses significantly positive toward business performance. The degree of compatibility among partner firms has been found to be an important predictor of the success or

failure of joint ventures(Shamdasani & Seth, 1995). Therefore, the result of SEM Model supports Hypothesis 3.

Table 6. Standardized Regression Weights and P-Value of Alliance Partner Relationship Management.

Path	Standardized Regression Weight	p
Commitment→ Financial Performance	0.416**	0.004
Trust →Financial Performance	0.242**	0.002
Compatibility →Financial Performance	0.529**	0.005
Control →Financial Performance	0.271**	0.009
Capabilities →Financial Performance	0.458**	0.008

* p < 0.05 ; ** p < 0.01 ; *** p < 0.001

Figure 4. The Influence of Partner Relationship Management of Strategic Alliance on Business Performance
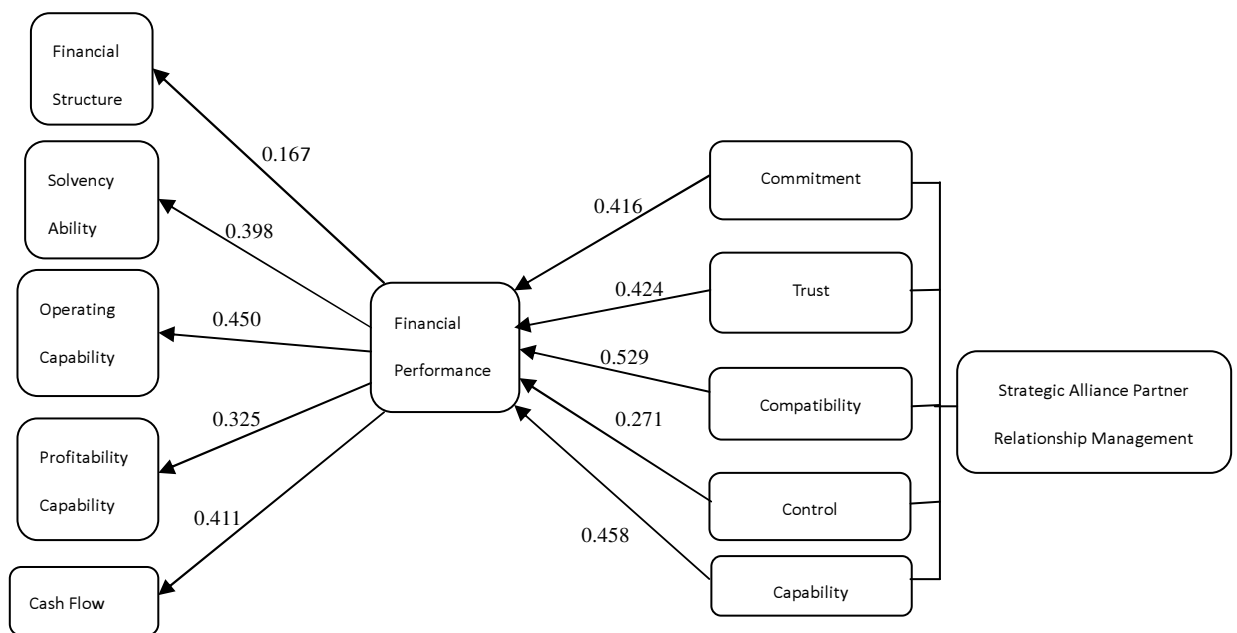
It is evident that the degree of control exercised by the alliance partner influences positively a company's business performance (Hypothesis 4).The standardized regression weight for control is 0.271 and p =0.009, regresses significantly positive toward business performance. Control is a key source of confidence in partner cooperation (Gulati, 1995; Parkhe, 1993; Medcof ,1997) relates that the control of an alliance is likely to contribute to alliance effectiveness. Therefore, the result of SEM Model supports Hypothesis 4.

It is evident that the level of capabilities displayed by the alliance partner

influences positively a company's business performance (Hypothesis 5). The standardized regression weight for commitment is 0.458 and p = 0.008, regresses significantly positive toward business performance. Hitt,Ireland, and Hoskisson (1996) state that capabilities represent an organization's capacity to deploy resources. It's the primary base of a strategic alliance to integrate to achieve a desired end state. Therefore, the result of SEM Model supports Hypothesis 5.

6. CONCLUSIONS

（1）The results indicate that commitment is the keystone to alliance success, and while the partners must offer complementary objectives and skills, both partners must believe that they can trust each other and that mutual commitment is a reality, and also employee and management satisfaction resulting from the favorable performance of the organizations and the alliance will reinforce their commitment further. Commitment has been described as a pledge by alliance members to undertake certain actions that will facilitate the attainment of the alliance's strategic goals. Therefore, a partner's commitment is manifested by the extent to which a partner is willing and able to commit resources (time, tangible and intangible) to fulfil the goals and objectives of the alliance, and be able to display the desire and intent to maintain the alliance.

（2）The results indicate that the trust generated by alliance partners, in part due to the efforts of both with respect to the maintenance of personal contacts among the managers allows the alliance to overcome certain critical moments in its development. Therefore, the building of trust and commitment depends on the partners' signaling to each other and the interpretation and response to this signaling in the relationship and partners in the alliance can help reduce relational risks, thus providing incentives for alliance partners to sustain the existing relationship unchanged. Particularlly, Trust has been seen as critical in Taiwan high technology firms relationships and strategic alliance. Inter-firm trust is a source of confidence in partner cooperation and in strategic alliances, it seems wide ranging in character, including lowering transaction costs, inducing desirable behavior, reducing the extent of formal contracts, and facilitating dispute resolution. Trust should not only be conceived as an input but also as an output—gradually developed and accumulated over time through the development of a relationship.

（3）Compatibility covers an array of issues including broad historical, philosophical, and strategic grounds, values and principles, and hopes for the future. The results indicate that the degree of compatibility among partner firms has been found to be an important predictor of the success or failure of joint ventures, an alliance

partner has complementary goals and shares similar orientations that facilitate coordination of alliance activities and execution of alliance strategies.

（4）The results indicate that control is a key source of confidence in partner cooperation, therefore organizations in alliances tend to be more confident about partner cooperation when they feel they have adequate level of control over their partners. Trust and control are inextricably interlinked with risk in strategic alliances, while strategic alliances present new opportunities with risks that can be shared.

（5）The results indicate that building on alliance management capability can be a source of competitive advantage. Repeated alliance engagements over time appear to contribute to the build-up of an alliance management capability, which the firm can then leverage to enhance the performance in subsequent alliances The issue of capabilities in alliances is also concerned with how complementary competencies between organisations can be coordinated effectively to maximise the partnership's competitive advantage. Therefore, an important characteristic in alliances is whether a partner has the operational capability in terms of resources and core-competencies.

（6）This research proposed a framework of strategic alliance analysis for evaluating prospective business performance. The division of the business performance can successfully be used as a diagnostic tool to provide a preliminary insight into Taiwan high technology industries for operators. By identifying the factors that influence strategic alliance- performance relationship, the findings of this dissertation is expected to help decision-makers in Taiwan high technology industries to effectively leverage their strategic resources, and simultaneously exploit strategic alliance to enhance business performance.

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