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# The Impact of IT-Business Strategic Alignment on Firm Performance: The Role of Environmental Uncertainty and Business Strategy

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## ABSTRACT

Aligning information technology (IT) strategy with business strategy has been one of the top concerns of practitioners and scholars for decades. Although numerous studies have documented the positive effects of IT-business alignment on organizational performance, few considered the contextual factors that may influence the relationship. This study attempts to fulfill this gap by investigating the role of environmental uncertainty and business strategy on the performance effects of the strategic alignment. Using survey data and statistical analysis, we show that the positive effect of the strategic alignment is significant only in high uncertainty environments. We also find that these effects on organizational performance vary across business strategies and performance measures. The main contribution of this study is the investigation of strategic alignment-performance relationship with respect to different contextual factors, thus providing a richer insight into IT-business strategic alignment issues.

**Keywords:** Strategic alignment, IT-business alignment, Environmental uncertainty, Business strategy, Organizational performance

## INTRODUCTION

IT-business strategic alignment is defined as the fit between IT strategy and business strategy in organizations (Henderson and Venkatraman, 1993). Strategic alignment helps organizations to use their IT resources to support their business strategy, thus enables them to maximize the impact of their IT investments, achieve harmony between IT and business, and increase organizations' competitive advantage, profit margins and growth (Alter, 2005; Byrd, Lewis and Bryan, 2006; Henderson and Venkatraman, 1993; Nelson and Coopride, 1996; Pearlman and Baker, 2005; Tan and Gallupe, 2006).

However, despite the importance and potential benefits of alignment, the number of organizations that successfully align their IT strategy with business strategy is shown to be considerably small (Rosa, 1998; Luftman, Papp and Brier, 1999). Many scholars have been intrigued by this phenomenon and investigated the underlying mechanisms that lead to alignment and performance (Chan, Sabherwal and Thatcher, 2006; Hu and Huang, 2006; Reich and Benbasat, 1996; Reich and Benbasat, 2000; Sabherwal and Kirs, 1994). We concur with the extant studies that strategic alignment is an important goal to endeavor and should have positive effects on organizational performance, and in line with that, further investigation of the alignment process could have significant theoretical and practical contributions. Yet, in the current literature of alignment studies there seem to be this underlying assumption that alignment will lead to measurable organizational performance, without considering many significant contextual factors.

We argue that environmental and organizational factors have the potential to mitigate or enhance the positive effects of alignment on organizational performance. For instance, it is likely that due to their business strategies some organizations may constantly change their structure and technology, and therefore, alignment may be short-lived and the performance impact cannot be captured with certain measures. Similarly, aligning IT and business strategies may play a more critical role in certain business environments than in others. For instance, in a relatively less turbulent environment with readily available resources, IT-business alignment may not have the same positive effect on performance as it may have in an environment where competition is intense and high operational efficiency is required to cut costs and survive.

The main objective of this study is to further investigate the relationship between strategic alignment and business performance, and examine this relationship with regards to environmental uncertainty and business strategy. In doing so, this study has significant theoretical and practical implications. To the extent of our knowledge, this is the first study to examine the role of environmental uncertainty on the performance effects of strategic alignment. Furthermore, although studies have suggested the role of business strategy on alignment-performance relationship, this study is the first to explicitly investigate the effect of alignment on different performance measures across different business strategies. Overall, the results of our analyses provide a richer and finer understanding of the relationship between alignment and performance; presenting an improved prescription for managerial practices.

## LITERATURE REVIEW

Achieving IT-business strategic alignment has been considered as one of the key issues in information systems (IS) management for the past decades (Brancheau and Wetherbe, 1987; King, 1978). Several studies in the IS literature have focused on the performance effect of IT-business strategic alignment. This body of literature has argued conceptually and found limited empirical support for the enhancing effect of alignment on organizational performance (Chan, Huff, Barclay and Copeland, 1997; Henderson and Venkatraman, 1993; Palmer and Marcus, 2000; Teo and King, 1999).

In an early attempt, Sabherwal and Kirs (1994) investigated the alignment between organizations' critical success factors and their IT capabilities, and reported the positive effect of alignment on performance. Motivated by the complexity of understanding and measuring strategic alignment, Chan et al. (1997) designed the *strategic orientation of the existing portfolio of information systems application* (STROEPIS) measure, which parallels to Venkatraman's (1989) *strategic orientation of business enterprise* (STROBE) measure and reported that strategic alignment has positive effects on innovation and market growth, and negative effects on reputation and financial performance (i.e., net profit relative to the competition). Using the same methodology, Sabherwal and Chan (2001) analyzed the effect of strategic alignment on perceived business performance. They postulated that organizations would have high levels of alignment when their IS strategy is at close proximity to the ideal IS strategy (IS for efficiency, IS for flexibility, or IS for comprehensiveness) implied by their business strategy (defender, prospector or analyzer). The findings of their study provided further support for the positive effects of strategic alignment on performance.

Similarly, Palmer and Markus (2000) conceptualized strategic alignment as the match between corporate strategy and IT strategy. Although they couldn't find statistical support for the performance effects of alignment, they reported that firms tend to choose an IT strategy that is consistent with their corporate strategy. After investigating strategic alignment performance relationship for small firms, Cragg, King and Hussin (2002) reported that firms with high levels of alignment performed better than firms with low levels of alignment. In a more recent study, Chan et al. (2006) also demonstrated the positive association between alignment and organizational success, which is conceptualized as the aggregation of several performance measures including reputation, prestige, new product frequency, and product quality.

Overall, studies in the alignment literature have converged on the positive effect of strategic alignment on organizational performance. On the other hand, significant questions remain unanswered. Chief among them is the impact of contextual factors, such as the competitive environment a firm is in and the competitive strategy the firm chooses, on the relationship between alignment and organizational performance. The impacts of competitive environment and competitive strategies on firm performance are well-documented in the strategic management literature (e.g., DeSarbo, Di Benedetto, Song and Sinha, 2004; Miller and Friesen, 1983; Slater, Olson and Hult, 2006; Zahra and Pearce II, 1990). Yet, in the alignment research, they are rarely considered as major components and the conceptualizations of these factors and their roles are diverse. Clearly, without integrating these factors into alignment models, the prescriptive recommendations derived from these models would be incomplete at best. In this study, we attempt to fill this significant gap in the alignment research. In the next section we present our research model and develop our hypotheses based on the extant literature.

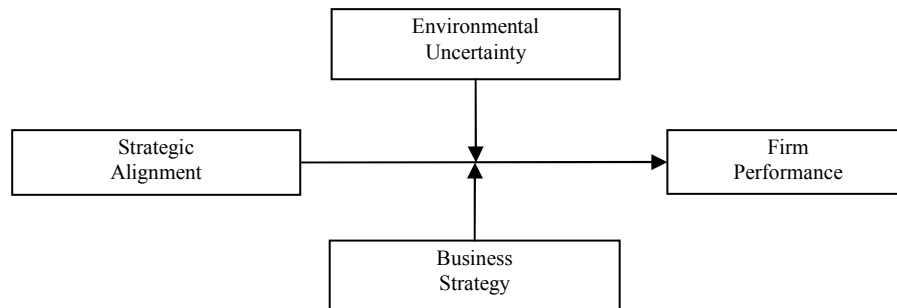
## RESEARCH MODEL AND DEVELOPMENT OF HYPOTHESES

Drawing on the literature, we postulate that strategic alignment between IT and business leads to improved organizational performance. However, we argue that this positive effect varies with the level of uncertainty of the environment and the business strategy of the organization. Our proposed conceptual model is presented in Figure 1.

### Environmental Uncertainty

Environmental uncertainty has been a key variable in the organizational theory literature (Aldrich, 1979; Dess and Beard, 1984) and conceptualized as three dimensions; complexity, dynamism, and munificence (Dess and Beard, 1984). Complexity dimension is related to the amount of information needed to understand the environment. As complexity

increases, managers fail to assess the environment effectively due to their bounded rationality. Dynamism dimension captures the instability of the environment. A high rate of environmental change challenges managers to adopt new requirements and strategies very often. Munificence dimension is closely associated with the amount of resources environment can provide to firms. The lack of necessary resources is considered an important factor of organizations' survivalability.



**Figure 1. Proposed research model for the impact of IT-business strategic alignment on firm performance**

Business executives view the impact of external factors such as competition and business environment as one of the most difficult aspects of IS strategic planning (Lederer and Mendelow, 1986). In the IS literature, one stream of studies considered environmental uncertainty as an antecedent of IT-business alignment. These studies conceptualized environmental uncertainty as both an inhibitor (Sabherwal and Kirs, 1994) and enabler (Chan et al., 2006) of strategic alignment, yet both approaches failed to provide statistical support for their arguments. Another stream of studies investigated the moderating effect of environmental uncertainty. Newkirk and Lederer (2006a) investigated the effect of different IS planning phases (e.g., strategy formulation) on the success of such planning (e.g., achieving alignment). They reported that this relation is moderated by environmental uncertainty, and the effect differs with the source of the uncertainty. Other studies reported that comprehensive IS planning is found to be more effective than incremental planning in uncertain environments (Newkirk and Lederer, 2006b; Salmela, Lederer and Reponen, 2000). However, the effectiveness of comprehensive planning was also found to be dependent on the source of uncertainty.

In addition to its effect on the process leading to alignment, environmental uncertainty also has effects on organizational performance. Miller and Friesen (1983) investigated strategy making and environment, and reported that successful firms have more analysis function (e.g., integration of decisions across divisions and groups) in hostile and dynamic environments. Rational decision making, which can be conceptualized as open channel communication of strategic and long term participative and consensus-seeking decision making at the managerial level, also leads to better decision quality (Hough and White, 2003) and have more positive effect on firm performance (Goll and Rasheed, 1997) in highly munificent and dynamic environments. Choe (2003) also reported similar findings regarding the relationship between alignment activities, environmental uncertainty, and performance. Parallel to the literature, we argue that the effect of alignment on performance will be different with respect to the level of uncertainty of the environment. Thus, we hypothesize that:

- H1: The effect of IT-business strategic alignment on organizational performance will differ across different dimensions of environmental uncertainty.

### **Business Strategy**

In the literature of business strategy, the typology developed by Miles and Snow (1978) is one of the most widely used for studying organizational performance. In this framework, business strategies are categorized into three archetypes: defender, prospector, and analyzer. The firms that choose defender strategy usually focus on protecting their market share in mature industries or markets primarily through improving operational efficiency. The firms that choose prospector strategy usually operate in turbulent and fast changing markets. They survive by closely monitoring market trend and actively seeking new product and market opportunities. The analyzer strategy is usually adopted by firms that are able to combine the defender and prospector strategies to deal with changing market conditions: in relatively stable market, the analyzers tend to focus on the defender strategy, and in relatively dynamic market, they tend to focus on the prospector strategy (Conant, Mokwa and Varadarajan, 1990; Miles and Snow, 1978).

Since its publication, numerous studies have tested various aspects of this framework and used it in a variety of analyses related to business strategy and performance (Conant et al., 1990). Sabherwal and Chan (2001) are among the first IS scholars who adopted this framework in the study of business and IT strategic alignment. They argued that different IS

strategies are suitable for different business strategies: “IS for efficiency” is for defenders, “IS for flexibility” is for prospectors, and “IS for comprehensiveness” is for analyzers. They found that while a strong overall relationship between alignment and firm performance exists, such association is significant only in prospectors and analyzers, not in defenders. However, the small sample size and the simple correlation tests used in their study make such findings less conclusive and hardly convincing. Nevertheless, the potential moderating effect of the strategy types on the alignment-performance relationship seems to warrant further investigation. Thus, we argue that:

- H2: The effect of IT-business strategic alignment on organizational performance will differ across different business strategies.

## RESEARCH DESIGN

### Data Collection

Based on the theoretical alignment model and a thorough review of the literature, we developed a survey instrument to collect data for validating the constructs in the model and testing the research hypotheses. A seven-point Likert scale was used for all the measurement items in the survey. Following a pilot test with EMBA students enrolled in a large public university to validate the survey instrument, we collected the data from organizations in Turkey primarily because of one of the authors' connection to the Turkish industry organizations. The survey instrument was translated into Turkish and back-translated for discrepancies with the original instrument in English. In addition to the language concerns, another important issue was to ensure that the survey instrument is not conceptually different across cultural settings, given that the original instrument was developed in a cultural setting different from that of the target population. Since constructs such as strategy, technology and environmental factors are considered as having low cultural dependency and are invariant in different cultural setting (Samiee and Athanassiou, 1998), with respect to this study, we believe that potential threats to conceptual equivalence was minimal.

An invitation for participation to the survey website was distributed through e-mail to 440 organizations in the directories provided by Istanbul Chamber of Industry. Also, one of the authors personally contacted the executives and business managers of 120 organizations. A total of 560 invitations were distributed. The target population included business administrators with adequate knowledge of IT and business strategizing processes. At the end of the process, 177 surveys were collected and 8 were discarded due to partial responses, resulting in 169 usable questionnaires. Approximately half of the respondents (45%) were C-level executives (e.g., Chief Executive Officer, Chief Financial Officer, etc.) and one third (33%) were directors in their organizations. The majority of the sample (78%) consists of firms with more than 500 employees. The average revenue of the firms in the sample was about \$1.3 billion. Manufacturing firms represent one third of the sample. This is followed by Wholesale/Retail firms (20%) and Technology/Telecommunication (10%) firms.

### Measures

Table 1 summarizes the measures and sources of the variables used in our analyses. Following the literature, we utilized a qualitative measure for business strategy in which we presented a detailed description of each strategy and asked the respondents to choose the strategy that is closest to their organizations' strategy. In order to define high and low environmental uncertainty, we used the mean of the dimensions (mean=5.12) and assigned values 1 through 5 to low environmental uncertainty group.

Variables	Measures	Sources
Strategic Alignment	Fit between IT strategy and Business strategy	Kearns and Sabherwal (2007) Segars and Grover (1998)
Performance	Return on Investment (ROI) Financial performance Net income	-
Environmental Uncertainty	Dynamism Heterogeneity Hostility	King and Sabherwal (1992) Newkirk and Lederer (2006a, 2006b) Sharfman and Dean (1991) Teo and King (1997)
Business Strategy	Defender Prospector Analyzer	Miles and Snow (1978)
Control Variables	Market Share Competition	Capon, Farley and Hoenig (1990)

Table 1. Measures and sources of variables used in the analyses

We analyzed the effects of environmental uncertainty and business strategy by using sub-groups rather than using dummy variables to represent the categories. This allowed us to investigate the predictive power of alignment on performance across sub-groups. After verifying that the missing data were not systematic, multiple regression method was used for data imputation. Table 2 presents the scale descriptive statistics and reliabilities of the constructs.

Construct	N	Number of items	Cronbach alpha	Minimum	Maximum	Mean	Std. Dev.
Strategic Alignment	169	4	.86	3.00	7.00	5.54	1.007
ROI	169	1	-	2.00	7.00	5.31	1.107
Financial Performance	169	1	-	1.00	7.00	5.25	1.210
Net Income	169	1	-	3.00	7.00	5.31	1.256
Dynamism	169	3	.94	1.00	7.00	4.85	1.507
Heterogeneity	169	5	.88	2.00	7.00	5.22	1.177
Hostility	169	3	.84	1.00	7.00	5.28	1.222

Table 2. Scale descriptive statistics and reliability of the constructs

**HYPOTHESIS TESTING AND RESULTS**

We utilized ordinary least square (OLS) analysis to test our models. To prevent any violations of the OLS assumptions, we conducted residual analysis to ensure the normality, linearity, and heterocedasticity of our data. Table 3 presents the analysis of the effect of alignment on different performance measures with regards to the level of uncertainty of the environment. Our analyses showed that when the environment has low uncertainty, alignment does not have a significant effect on any of the organizational performance measures (with the exception of its limited effect on ROI in low-dynamism environments;  $b=0.25$ ,  $p=0.075$ ).

	<i>High-Dynamism</i> (N=91)			<i>Low-Dynamism</i> (N=78)		
	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income
Intercept	2.267 (.001)	2.43 (.001)	2.534 (.002)	3.166 (.004)	2.211 (.007)	1.901 (.034)
Alignment	<b>.25</b> (.010)	<b>.31</b> (.003)	.15 (.179)	.08 (.651)	<b>.25</b> (.075)	.027 (.858)
Market Share	<b>.30</b> (.001)	<b>.21</b> (.030)	<b>.36</b> (.001)	<b>.28</b> (.054)	<b>.32</b> (.004)	<b>.575</b> (.000)
Adjusted R <sup>2</sup>	.18	.14	.13	.04	.17	.25
Model Sig. (p value)	.000	.001	.001	.080	.000	.000
	<i>High-Heterogeneity</i> (N=105)			<i>Low-Heterogeneity</i> (N=64)		
	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income
Intercept	2.392 (.001)	2.391 (.000)	4.053 (.000)	3.251 (.008)	2.432 (.010)	1.064 (.268)
Alignment	<b>.24</b> (.012)	<b>.32</b> (.001)	.12 (.261)	.031 (.891)	.16 (.351)	.05 (.794)
Market Share	<b>.28</b> (.003)	<b>.21</b> (.019)	<b>.30</b> (.003)	<b>.33</b> (.036)	<b>.36</b> (.004)	<b>.701</b> (.000)
Adjusted R <sup>2</sup>	.14	.15	.09	.06	.16	.37
Model Sig. (p value)	.000	.000	.004	.065	.002	.000

	<i>High-Hostility</i> (N=109)			<i>Low-Hostility</i> (N=60)		
	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income
Intercept	2.814 (.000)	2.405 (.000)	2.823 (.000)	2.266 (.055)	2.176 (.020)	1.071 (.224)
Alignment	<b>.19</b> <b>(.058)</b>	<b>.30</b> <b>(.002)</b>	.11 (.321)	0.24 (.253)	.25 (.138)	.09 (.561)
Market Share	<b>.24</b> <b>(.007)</b>	<b>.22</b> <b>(.012)</b>	<b>.34</b> <b>(.001)</b>	<b>.32</b> <b>(.058)</b>	<b>.324</b> <b>(.016)</b>	.667 (.561)
Adjusted R <sup>2</sup>	.09	.14	.10	.10	.16	.38
Model Sig. (p value)	.002	.000	.002	.022	.002	.000

Note: beta coefficient (p value)

**Table 3. Results of regression analyses: environmental uncertainty**

On the other hand, analyses of high uncertainty environments revealed interesting results. First, in our models, alignment has a bigger impact on ROI (b=0.31, p=0.003; b=0.32, p=0.001; b=0.30, p=0.002 for high dynamism, heterogeneity and hostility, respectively) compared to financial performance (b=0.25, p=0.010; b=0.24, p=0.012; b=0.19, p=0.058 for high dynamism, heterogeneity and hostility, respectively). Second, our models explain approximately the same amount of variance in ROI (R<sup>2</sup>=0.14, 0.15, 0.14 for high dynamism, heterogeneity and hostility, respectively), whereas they explain varying levels of variance in financial performance (R<sup>2</sup>=0.18, 0.14, 0.09 for high dynamism, heterogeneity and hostility, respectively).

With a similar approach, we investigated how business strategy affects the relationship between strategic alignment and organizational performance (Table 4). The analysis of the full sample revealed that alignment has significant positive effect on financial performance (b=0.21, p=0.023) and ROI (b=0.29, p=0.000) as expected, but no effect on net income. In our models, strategic alignment and control variables explain 12% of variance in financial performance and 16% of variance in ROI (without the alignment variable, the models explain 10% and 9% variance respectively; indicating that alignment explains considerable amount of variance especially in ROI measure).

Further analyses showed that the positive effect of alignment varies across business strategies and performance measures. For instance, for both defenders and prospectors, the effect of alignment on financial performance is insignificant. On the other hand, for both groups, this effect is significant on ROI (Defender: b=0.39, p=0.033, R<sup>2</sup>=0.37; Prospectors: b=0.32, p=0.038, R<sup>2</sup>=0.26). Contrary to defenders and prospectors, for analyzers, alignment has significant effect on financial performance (b=0.28, p=0.009, R<sup>2</sup>=0.19) and limited effect on ROI (b=0.22, p=0.064, R<sup>2</sup>=0.06). Investigation of sub-groups did not provide any statistical evidence regarding the effect of alignment on net income as well.

## CONCLUDING REMARKS

The findings of this study present a more detailed analysis of the positive effects of strategic alignment on organizational performance, thus providing a finer prescriptive guidance to executives with respect to achieving higher level of performance through strategic alignment. First, with regards to environmental uncertainty, our findings reveal that strategic alignment has significant positive effects on organizational performance only in high uncertainty environments. This result is not unexpected in a sense that strategic alignment enables organizations to maximize their IT resources to support their business strategy, and when there is low uncertainty in the environment, organizations may not need high degrees of alignment to achieve performance. For example, when there are only few competitors, organizations can perform successfully (e.g., sales, market share) without achieving strategic alignment.

Second, from the business strategy perspective, our findings show that the effect of strategic alignment varies across performance measures and business strategies. Grouping by business strategy has revealed that defenders and prospectors can observe the positive effect of alignment on ROI, whereas analyzers can observe this effect on financial performance. This underlines the importance of organizational characteristics and how they relate to IT in organizations. For instance, defenders mostly utilize single core technologies to achieve efficiency rather than to increase market share or to innovate, and these characteristics may be one of the underlying reasons why strategic alignment has insignificant effect on financial performance for defenders.

	<i>Full Sample</i> (N=169)			<i>Defenders</i> (N= 32)			<i>Prospectors</i> (N= 38)			<i>Analyzers</i> (N=99)		
	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income	Fin. Per.	ROI	Net Income
Intercept	2.747 (.000)	2.346 (.000)	2.197 (.000)	4.344 (.018)	1.350 (.162)	1.999 (.110)	3.069 (.034)	1.943 (1.684)	1.318 (.309)	2.205 (.002)	3.133 (.000)	2.321 (.008)
Alignment	<b>.21</b> <b>(.023)</b>	<b>.29</b> <b>(.000)</b>	.13 (.165)	-.07 (.824)	<b>.39</b> <b>(.033)</b>	.14 (.542)	.15 (.399)	<b>.32</b> <b>(.038)</b>	.04 (.827)	<b>.28</b> <b>(.009)</b>	<b>.22</b> <b>(.064)</b>	.202 (.121)
Market Share	<b>.25</b> <b>(.002)</b>	<b>.24</b> <b>(.001)</b>	<b>.437</b> <b>(.000)</b>	.22 (.345)	<b>.35</b> <b>(.008)</b>	<b>.46</b> <b>(.008)</b>	.21 (.296)	.28 (.102)	<b>.72</b> <b>(.000)</b>	<b>.29</b> <b>(.002)</b>	<b>.18</b> <b>(.084)</b>	<b>.323</b> <b>(.004)</b>
Competition	<b>-.17</b> <b>(.055)</b>	-.052 (.518)	-.025 (.779)	.02 (.945)	<b>.31</b> <b>(.076)</b>	.27 (.210)	<b>-.392</b> <b>(.070)</b>	-.27 (.129)	-.06 (.750)	-.15 (.115)	-.066 (.544)	-.090 (.450)
Adjusted R <sup>2</sup>	.12	.16	.18	-.07	.37	.21	.14	.26	.32	.19	.06	.11
Model Sig. (p value)	.000	.000	.000	.810	.001	.021	.045	.000	.001	.000	.035	.003

Note: beta coefficient (p value)

Table 4. Results of regression analyses: business strategy



Finally, from the practitioners' perspective, our study suggests that positive effects of IT-business alignment may not always be reflected in organizational performance. This emphasizes an important point. Managers should not forego efforts on strategic alignment even if they cannot observe significant increase in organizational performance. We support the arguments that achieving alignment needs to be an important goal for the top management, yet our study show that it is possible that its positive effects may not be reflected directly in organizational performance, or may not be captured with short term performance measures, especially in low uncertainty environments.

We must note that there are some notable limitations in this study. For example, we analyzed the perceptions of managers regarding the degree of strategic alignment and organizational performance. This creates a potential for method bias, which may distort the findings of our study. In addition, due to the characteristics of the data collection process, we weren't able to calculate the non-response bias. Lastly, this study was built on the common proposition that IT strategy should support business strategy. However, other schools of thought (e.g., synchronization of IT and business strategies and convergence of IT and business strategies) are also suggested in the literature (Sambamurthy, 2008). Future research can investigate the models with respect to these new approaches to strategic alignment. Another venue for future studies is to investigate other potential contextual factors such as industry membership or IT intensity of organizations.

## REFERENCES

1. Aldrich, H. (1979) Organizations and environments, Prentice-Hall, Englewood Cliffs, NJ.
2. Alter, A.E. (2005) CIOs Shift: Focus is on revenue, not on saving money, *CIO Insight*, October 15, 2005. <http://www.cioinsight.com/article2/0,1540,1875251,00.asp>. Accessed on: October 27, 2007
3. Brancheau, J.C. and Wetherbe, J.C. (1987) Key issues in information systems management, *MIS Quarterly*, 11, 1, 23-45.
4. Byrd, T.A., Lewis, B.R. and Bryan, R.W. (2006) The leveraging influence of strategic alignment on IT investment: An empirical examination. *Information and Management*, 43, 3, 308-321.
5. Capon, N., Farley, J.U. and Hoenig, S. (1990) Determinants of financial performance-A meta-analysis, *Management Science*, 36, 10, 1143-1159.
6. Chan, Y.E., Huff, S.L., Barclay, D.W. and Copeland, D.G. (1997) Business strategic orientation, information systems strategic orientation, and strategic alignment, *Information Systems Research*, 8, 2, 125-150.
7. Chan, Y.E., Sabherwal, R. and Thatcher, J.B. (2006) Antecedents and outcomes of strategic IS alignment: An empirical investigation, *IEEE Transactions on Engineering Management*, 53, 27-47.
8. Choe, J. (2003) The effect of environmental uncertainty and strategic applications of IS on a firm's performance, *Information & Management*, 40, 257-268.
9. Conant, J. S., Mokwa, M. P., Varadarajan, P. R. (1990) Strategic types, distinctive marketing competencies and organizational performance: A multiple measures-based study, *Strategic Management Journal*, 11, 5, 365-383.
10. Cragg, P., King, M. and Hussin, H. (2002) IT alignment and firm performance in small manufacturing firms, *Journal of Strategic Information Systems*, 11, 2, 109-132.
11. Desarbo, W.S., Di Benedetto, C.A., Song, M. and Sinha I. (2004) Revisiting the Miles and Snow strategic framework: uncovering interrelationships between strategic types, capabilities, environmental uncertainty, and firm performance, *Strategic Management Journal*, 26, 1, 47-74.
12. Dess, G.G. and Beard, D.W. (1984) Dimensions of organizational task environments, *Administrative Science Quarterly*, 29, 1, 52.
13. Goll, I. and Rasheed, A.M.A. (1997) Rational decision-making and firm performance: The moderating role of environment, *Strategic Management Journal*, 18, 7, 583-591.
14. Henderson, J.C. and Venkatraman, N. (1993) Strategic alignment - leveraging information technology for transforming organizations, *IBM Systems Journal*, 32, 1, 4-16.
15. Hough, J.R. and White, M.A. (2003) Environmental dynamism and strategic decision-making rationality: An examination at the decision level, *Strategic Management Journal*, 24, 481-489.
16. Hu, Q. and Huang, C.D. (2006) Using the balanced scorecard to achieve sustained IT-business alignment: A case study, *Communications of the Association for Information Systems*, 17, 181-204.
17. Kearns, G. and Sabherwal, R. (2007) Strategic alignment between business and information technology: A knowledge-based view of behaviors, outcome, and consequences, *Journal of Management Information Systems*, 23, 3, 129-162.
18. King, W.R. (1978) Strategic planning for management information systems, *MIS Quarterly*, 2, 27-37.

19. King, W.R. and Sabherwal, R. (1992) The factors affecting strategic information systems applications, *Information & Management*, 23, 217-235.
20. Lederer, A.L. and Mendelow, A.L. (1986) Issues in Information Systems Planning, *Information and Management*, 10, 245-254.
21. Luftman, J., Papp, R. and Brier, T. (1999) Enablers and inhibitors of business-IT alignment, *Communications of AIS*, 1, 11, 1-33.
22. Miles, R.E. and Snow, C.C. (1978) *Organizational Strategy, Structure and Process*, McGraw-Hill, New York.
23. Miller, D. and Friesen, P.H. (1983) Strategy-Making and Environment: The third link, *Strategic Management Journal*, 4, 221-235.
24. Nelson, K.M and Coopridge, J.G. (1996) The contribution of shared knowledge to IS group performance, *MIS Quarterly*, 20, 4, 409-432.
25. Newkirk, H.E. and Lederer, A.L. (2006a) The effectiveness of strategic information systems planning under environmental uncertainty, *Information and Management*, 43, 481-501.
26. Newkirk, H.E. and Lederer, A.L. (2006b) Incremental and comprehensive strategic information systems planning in an uncertain environment, *IEEE Transactions on Engineering Management*, 53, 380-394.
27. Palmer, J.W. and Markus, M.L. (2000) The performance impacts of quick response and strategic alignment in specialty retailing, *Information Systems Research*, 11, 3, 241-259.
28. Pearlman, E. and Baker, E.H. (2005). Measure of alignment predicts success, *CIO Insight*, Oct. 15, 2005 <http://www.cioinsight.com/article2/0,1540,1878432,00.asp>. Accessed on: October 27, 2007.
29. Reich, B.H. and Benbasat, I. (1996). Measuring the linkage between business and information technology objectives, *MIS Quarterly*, 20, 1, 55-81.
30. Reich, B.H. and Benbasat, I. (2000). Factors that influence the social dimension of alignment between business and information technology objectives, *MIS Quarterly*, 24, 1, 81-113.
31. Rosa, J. (1998) CIOs challenged by disparate goals, *Computer Reseller News*, Dec. 7, 1998, 43.
32. Sabherwal, R. and Chan, Y.E. (2001) Alignment between business and IS strategies: A study of prospectors, analyzers, and defenders, *Information Systems Research*, 12, 1, 11-33.
33. Sabherwal, R. and Kirs, P. (1994) The alignment between organizational critical success factors and information technology capability in academic-institutions, *Decision Sciences*, 25, 2, 301-330.
34. Salmela, H., Lederer, A.L. and Reponen, T. (2000) Information systems planning in a turbulent environment, *European Journal of Information Systems*, 9, 3-15.
35. Sambamurthy, V. (2008) Creating value through IT and business alignment: How does IS research inform practice? Keynote speech, *PACIS 2008*, Suzhou, China, July 3-7, 2008.
36. Samiee, S. and Athanassiou, N. (1998) International Strategy Research: Cross-cultural methodology implications. *Journal of Business Research*, 43, 79-96.
37. Segars, A.H. and Grover, V. (1998) Strategic Information Systems Planning Success: An Investigation of the Construct and Its Measurement, *MIS Quarterly*, 22, 2, 139-163.
38. Sharfman, M.P. and Dean, J.W. (1991) Conceptualizing and measuring the organizational environment, *Journal of Management*, 17, 4, 681-700.
39. Slater, S.F., Olson, E.M. and Hult, T.M. (2006) The moderating influence of strategic orientation on the strategy formation capability-performance relationship, *Strategic Management Journal*, 27, 12, 1221-1231.
40. Tan, F.B. and Gallupe, R.B. (2006) Aligning business and information systems thinking: A cognitive approach, *IEEE Transactions on Engineering Management*, 53, 2, 223-237.
41. Teo, T.S.H. and King, W.R. (1997) Integration between business planning and information systems planning: An evolutionary-contingency perspective, *Journal of Management Information Systems*, 14, 1, 185-214.
42. Teo, T.S.H. and King, W.R. (1999) An empirical study of the impacts of integrating business planning and information systems planning, *European Journal of Information Systems*, 8, 3, 200.
43. Venkatraman, N. (1989) Strategic orientation of business enterprises, *Management Science*, 35, 8, 942-962.
44. Zahra, S.A. and Pearce II, J.A. (1990) Research evidence on the Miles-Snow typology, *Journal of Management*, 16, 4, 751-768.