International Journal of Engineering and Technical Research (IJETR)
ISSN: 2321-0869 (O) 2454-4698 (P), Volume-3, Issue-10, October 2015

The Knowledge Management Strategic Alignment Model (KMSAM): A Holistic Perspective

Chao-Yen Wu, Yue-Yang Chen, Wen-Hsin Fang, Shih-Fu Sung

***Abstract*— Since knowledge play a critical role in business operations, it is necessary to know about how to manage and integrate various kinds of resources effectively that are contributed to knowledge management. Recently, the importance of the information technology (IT) for effective KM activities has been confirmed. However, their well fit doesn't always achieve positive organizational outcomes because business strategy and knowledge strategy, as well as human resource management strategy are interdependent that must be integrated in a holistic consideration. Drawing on the concept of strategic alignment, this study proposed a KM strategic alignment model (KMSAM) within which business strategy, HRM strategy, KM strategy, and IT strategy are coexisted. This study contends that this strategic alignment may contribution to knowledge management performance, IT performance, as well as business performance.**

***Index Terms*— Strategic alignment, business strategy, knowledge management strategy, information technology strategy, knowledge management performance.**

I. INTRODUCTION

In the unpredictable and turbulent business environment, even large, successful organizations are facing severe challenges in the global environment. Executives who don't closely monitor changes in their circumstance and don't take the specific characteristics of complementary resources into considerations as they plan, organize, apply, and control are likely to struggle to achieve sustainable competitive advantage. Therefore, it is critical for business to discern what kinds of skills or capabilities they owned and, further, how to create the resources that are valuable, rare, and difficult to imitate or substitute [1], [2]. In this vein, integrating the firms' various kinds of advantaged weapons that are costly-to-copy as a whole is seen as the fundamental driver of performance [2]-[4].

In the new era of complicating and rapidly changing business environment, knowledge management (KM) is regarded as pressing issues in contemporary business, as corporations have found that knowledge is the organizational critical asset and potential strategic resource that gives a basis for competitive advantage [5]-[9]. Specifically, the implementation of KM projects compliant with various KM strategies would provide organizations dynamic capabilities of improving knowledge quality and quantity as well as consolidating the value and practicability of knowledge[10]-[15].

Recently, both researchers and practitioners have started to realize the importance of the information technology (IT) for effective KM activities [16]-[20] or interorganizational learning facilitating [21]. It is found that an organization which was high quality in both KM and IT (a high-high fit) achieved high KM performance and satisfaction more frequently than those whose quality fitted low on either dimension or both[12],[23]. That is, effective KM project alone can't lead to success without the support of IT [24]-[26]. Similarly, IT alone can do nothing without good KM initiatives [24] in attaining KM success [27] or organizational performance [27]-[30]. Accordingly, the strategic alignment between KM and IT with other resources or strategies used in managing business activities must be considered for business performance [31], [32]. In a more practical perspective of how knowledge management may be implemented, three objectives or problems into goals and measures for knowledge management can be found, they are: the organizational measures, the humane resources management measures, and the technical measures [33]. These three descriptions have been viewed as feasible measures or means for KM effectiveness [34]-[36]. Therefore, a linkage of effective IT strategy and KM strategy that are consistent with business strategy and human resource management is the key to reduce costs, which in turn, a higher performance achieved [6], [37].

It has been realized that research regarding the integrated investigation of various strategies of the organization is not sufficient. Rather, the analysis and design of the organization as a whole is critical to achieve efficient organizational benefits. In the practical terms, the basic alignment mechanism is "strategy" [38], and it is though that a match between strategy and organization is the key driven to effectiveness at realizing intended strategies. Therefore, this study focused on four types of strategies discussed above that are critical to business in today's knowledge-based organizations, namely business strategy, human resource management (HRM) strategy, knowledge management (KM) strategy, and information technology (IT) strategy. We posit that performance constructs including business performance, KM performance, and IT performance are affected by strategic alignment among these four strategies.

II. THEORETICAL BACKGROUND

A. The Perspective of Strategic Alignment

The concept of alignment (or fit) is a key notion in structural contingency theory [38] (and is well known and discussed in managerial behavior and organizational analysis [39]. Numerous of pseudonyms have been termed with alignment such as strategic alignment [40]-[43]; fit [44],

Chao-Yen Wu is an Associate Professor at the Department of Information Management in the I-Shou University, Taiwan.

Yue-Yang Chen is the corresponding author and is an Associate Professor at the Department of Business Administration in the I-Shou University, Taiwan.

Wen-Hsin Fang is an Assistant Professor at the Department of Business Administration in the I-Shou University, Taiwan.

integration [45], bridge [46], harmony [47], [48], fusion [49], and linkage [50], [51]. However, no matter what words or phrases it is, it concerns the integration of strategies relating to the business and its related contingency variables. Its commonly basic proposition is that "organizational performance is a consequence of fit between two or more factors; such as, the fit between organization environment, strategy, structure, system, style, and culture [52].

The studies on the fit concept render a solid theoretical foundation and analytical methods in practice [52], [53]. The define fit as three approaches: selection, interaction, and systems approaches; whereas uses six different perspectives from which fit can be defined and explained [53], these are fit as: matching, moderation, mediation, gestalts, covariation, and profile deviation. The framework that Venkatraman proposed classifies each perspective along three dimensions: the criterion-specific or criterion-free (the presence or absence of a criterion variable; few to high), the degree of specificity of the functional form of fit-based relationship (low to high), and the number of variables in the fit equation (few to many). He also describes each perspective of fit according to these three dimensions, along with its underlying conceptualization, the verbalization of a strategy proposition, and the appropriate analytical schemes for testing the relationships.

B. The Importance of Strategic Alignment

The issue of alignment of alternative resources is one of the top concerns of executives and senior managers in general since the mid-1980s [47], [54]. In research, they indicate that the increased organizational effectiveness is driven by the internal consistency or "fit" among the patterns of relevant contextual, structural, and strategic factors [55]. It also suggests that the alignment between organizational processes and strategic decisions is contribution to competitive advantage [56].

The importance of strategic alignment of IT/IS is also acknowledged [42], [57]. It indicated that contingency, and fit (alignment) theory is the top five frequently used out of the 31 theoretical framework categories of all the 993 studies in MIS fields [58]. It has been realized by researchers that an absence of strategic alignment probably can cause organizations inability to realize sufficient value from IT investments [42], [59]. Alignment has been found not only a great contribution to potential capabilities of an organizational IT infrastructure, but also a significant positive direct effect on organizational performance [60]. Conversely, misalignment in organizations results in a redundancy and inefficiency in IT functions and in an increase in costs and delays [61], more seriously, it can be one of the critical reasons in organizational performance lessened [41], [62].

C. Research and Models on Alignment in KM Field

According to the discussions aforementioned, strategic alignment between business strategy and IT strategy is a critical issue within organization that has been stated frequently [63]-[65]. However, there are few studies that empirically address the issue of strategic alignment in KM field. This is what said "the missing link in knowledge management research" [66]. It is because of the contingency researchers were discovering, in the context of strategic alignment, that predicting KM or business performance involved something more complex than isolating specific strategy factors that a more "holistic" configuration perspective needed to be concerned.

Despite of the limitation of research regarding the strategy-related alignment of KM, consequently, there still a little research begins looking at the impact of situational influences or contextual factors on organizations. For example, Becerra-Fernandez and Sabherwal [67] take the perspective of contingency theory, considering that the impact of KM process on KM satisfaction is moderated by nature of subunit tasks it performed. After conducting several interviews and survey data collecting from 159 individuals across 8 subunits, their findings support the contingency framework. They categorize various KM styles into dynamic, system-oriented, human-oriented, and passive. They verify empirically how these different scenarios improve business performance and finally find that dynamic style that integrating explicit- with tacit-oriented methods is result in better corporate performance. They also demonstrate that the fit between the nature of knowledge and the type of tie used to transfer knowledge affects organizational learning outcomes.

These studies aforementioned find better performance outcomes occurred when components congruent with each contingency factor. However, more research is needed on the mechanism through which strategy-related alignment affects learning and KM outcomes as well as organizational performance [68], [69]. That is a significant link to performance requires a holistic approach considering KM [31], [67] as well as all the factors of IT/IS/IM practices and information behavior and values [70]. Some studies that conduct with this issue are described as follows.

Based on a knowledge-based view of organizations, they assume that for each type of knowledge strategy there should be internal consistency between strategic actions and other organizational practices and systems [71]. They made a theoretical framework to show that a firm can enhance its knowledge base, and thereby positively affect organizational performance by a congruency with HRM practices and knowledge strategy. Additionally, in a research conducted [26], taking knowledge orientation, strategic orientation in one model, showing that both of which are influenced by business environment, serving the alignment between them as an antecedent to predict organizational performance (as Figure 1 depicted). Through analysis of surveys collected from over 150 organizations, the results show that knowledge orientation varies significantly across organizations of different strategic orientation. That is, the strategic alignment between knowledge orientation and strategic orientation has a significant direct effect on organizational performance.

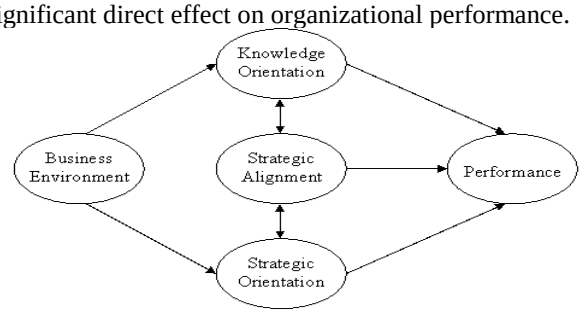

Figure 1 Truch and Bridger's strategic alignment model [26]

Drawing on Goodhue and Thompson's [72] TTF (task-technology fit) model and adaptive structuration theory proposed [73], propose a KMS performance fit model (as

Figure 2 depicted), indicating that the fit between task characteristics and KMS characteristics determine the impact on performance by individuals and groups [74]. However, this articles is basically just a theoretical-based paper in which four propositions are been proposed without empirically verify their research model.

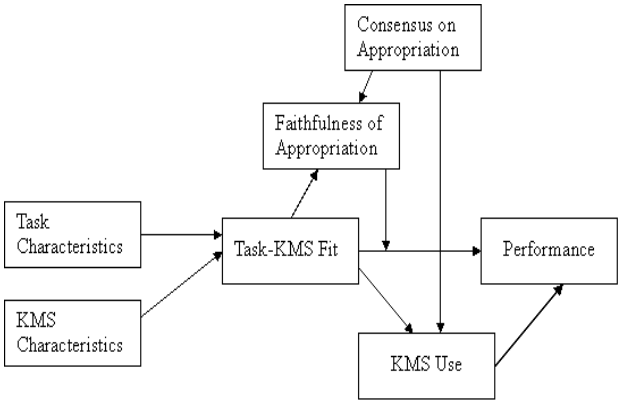

Figure 2 TTF and social construction model [74]

In addition, according to information processing theory, organizational learning theory, the knowledge-based theory of the firm, and the theory of knowledge creation, It use secondary data on 89 KM announcements from 1995 to 2002 to validate the hypotheses they proposed, these hypotheses are the linkage of cumulative abnormal return (CAR) to alignment between industry innovativeness and KM process, alignment between firm efficiency and the KM process, firm-specific instability ,and firm diversification. The results support for the theory-based arguments, and make contribution on developing a contingency framework for the effectiveness of KM efforts [25].

Furthermore propose a knowledge-based crisis management framework to demonstrate the alignment of knowledge based strategies with crisis management strategies on crisis management performance [75]. By conducting case analysis, they point out that proper alignment of knowledge based strategies with crisis management can help organizations identify their tasks to perform and the knowledge they need. They make an empirical study to speculate whether the relationships between corporate strategy, human resource management strategy, and KM strategy exist or not [76]. By conducting 147 Taiwanese large companies as survey samples, they posit that a better KM effectiveness which is measured by process outcome, learning capability, and organizational outcomes is determined by the alignment among KM strategy and both corporate as well as HRM strategy.

Finally, an important article that makes an important contribution to the concept of strategic alignment in KM field is the study [77]. According to the premise of original ITSAM that "the effective and efficient utilization of IT requires the alignment of IT with business strategies" [42], he proposes the KM strategic alignment model (KMSAM), in which IT strategy is replaced by knowledge strategy, and made the underlying argument: "the effective and efficient use of organizational knowledge requires the alignment of knowledge strategies with business strategies" (pp. 158-159). It is his thought that business strategy or knowledge strategy can be seen as a balancing act between the external domain and internal domain which contains opportunities/threats and capabilities/arrangements, respectively.

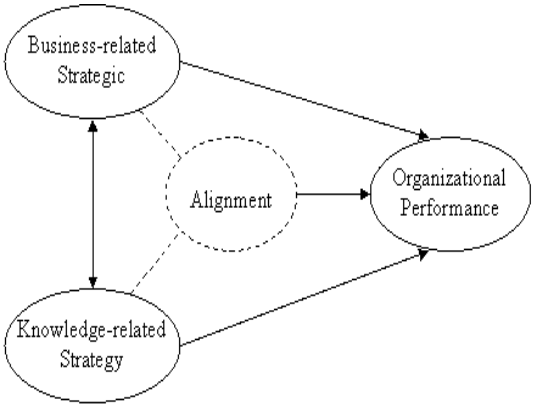

Figure 3 Asoh's strategic alignment model [31]

The second important research in KMSAM field is a doctoral dissertation performed [31]. Drawing on Abou-Zeid's study in terms of KMSAM, he proposes a model (see Figure 3) wherein business strategy and knowledge strategy are co-aligned [77]. The results of this empirical study indicate that business strategy and knowledge strategy and their alignment indeed play key roles in the creation of organizational performance.

III. Research Model and Propositions

A. Business Strategy

In the studies of organizational behavior and strategy management, there are three widely used business strategic frameworks; these are generic typologies of Miles and Snow and Porter [78], [79], and the fined-grained framework of Venkatraman [80]. The reasons why Miles and Snow's and Porter's strategic frameworks are termed "generic" and "typologies" are because of their not focus on any specific industry so can be applied to any business [78], [79], and "they consider an array or bundle of idealized strategic choices integrated together to form specific strategic types" [31]. In contrast to the fine-grained framework that does not offer any categorization scheme, the generic typologies of Miles and Snow's and Porter's strategy frameworks can be used to classified firms into certain category[78], [79].

Miles and Snow's typology is the most popular stream of business strategy research [78], [80]-[82]. It has been quoted more than 650 times in social sciences citation index (SSCI) from 1989 to 2000 [82]. Miles and Snow's typology identified four types of business strategies and its main strength is "the simultaneous consideration of the structure and processes necessary for the realization of a given type of business strategy." [82]. It not only shows a complex view of organizational and environmental processed, but also indicates the attributes of product, market, technology, organizational structure and management characteristics [83]. In Miles and Snow's study, they assert that a firm could fall into one of these four categories, labeled defender, prospector, analyzer, and reactor, according to the perception it has of its environment. The first three types of typologies are expected to have a positive effect on business performance and share the same continuum, where the defender and prospector are at the two opposite ends of the

poles, and the analyzer stands in the middle that shares some characteristics with each of the two strategies. The reactor, conversely, is a residual type that lacks a viable strategy. Moreover, it has been considered not really a strategy at all [84], and some research excluded it in empirical studies [31], [39], [85]-[88].

Drawing on the perspective proposed [78], Venkatraman's strategic orientation of business enterprises (STROBE) operationalization of business strategy is another widely used one [80], [89]. He defined STROBE as "…the general pattern of various means employed to achieve the business goals, with a particular emphasis on the business-unit level of the organizational hierarchy." [90].

In the considerations of means, business level analysis, broad, realized, and holistic perspective of strategy, six important dimensions of strategic orientation are proposed in Venkatraman's study: aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness [90]. These constructs demonstrated adequate reliability and validity for serving useful measures in strategy research to test the theoretical relationships, and found to have a significant impact on business performance [80].

After these two pioneer studies of conceptualizing in business strategy, focusing on one or more of the six business strategy attributes, Sabherwal and Chan develop the ideal business strategy profiles with three configurations, namely Defenders, Analyzers, and Prospectors. Furthermore, the ideal profiles of IS strategy attributes for Defenders, Analyzers, and Prospectors are allocated respectively for facilitating operational efficiency. The findings indicate that alignment between business strategy and IS strategy is believed to improve business performance [85].

Accordingly, researchers have conducted a number of empirical studies corroborating the importance of the strategic orientation of a firm to its performance [80]. In his study of strategic management, Miller posits that there is a positive relationship between strategy and performance under various conditions. In a field study of 200 business units, the relationships between strategic orientation of business enterprises and business performance are also highlighted [80] , [91]. By extending Venkatraman's six dimensions of STROBE to eight dimensions (company aggressiveness, analysis, internal defensiveness, external defensiveness, futurity, proactiveness, risk aversion, and innovativeness), [41] report that business strategic orientation has a significant positive effect on business performance. Previous studies also examined that various dimensions of business strategy (i.e., prospector, analyzer, and defender) to be positively related to business performance [83], [92], [93]. Thus, the following proposition is proposed:

P1: Business strategy has a significant positive direct effect on business performance

B. Human Resource Management Strategy

It is thought that the employees within organizations can be a critical source for sustained competitive advantage. The HRM function in business and their impact on organizational performance have received a growing body for both academics and practitioners [94], [95], and their positive relationship also have been proved [96], [70]. The importance of strategic alignment between HRM strategy and business strategy is also been highlighted [38], [97], [98]. The strategic role of HRM focuses on the design and implementation of a set of internally consistent policies and practices that ensure a firm's human capital (e.g., employees' knowledge, skills, and abilities) to achieve the business goals [99], [100]. In short, HRM strategies make the functions of HRM discernible and ensure the HRM policy and practices in several areas (e.g., staffing, employee influence, employee rewards and autonomy, etc.) are consistent and aligned with business objectives [101].

According to Delery and Doty's classification to HRM strategies, they suggest two kinds of employment systems that organizations employ called "market system" and "internal system" [86]. The argument is similar to that of classification of HRM practices of "buy-bureaucratic" and "make-organic" strategies in consideration of four broad HRM policy areas: HR flow, work systems, reward systems, and employee influence. Firms that adopt "buy-bureaucratic" HRM strategy tend to hire employees outside of the companies, less opportunities to offer trainings to employees, define job contents specifically, compensation is paid by individual's seniority, and workers are limited in decision-making[101]. Conversely, those who adopt "make-organic" HRM strategy tend to promote managers from within, provide extensively trainings to employees, define job in a broader view, compensation is paid by individual's job performance, and workers are encouraged to participate in decision-making [101]. According to Shih and Chiang's assertion [76], "make-organic" HRM strategy is compatible with "personalization" KM strategy whereas "buy-bureaucratic" HRM strategy is compatible with "codification" KM strategy.

From the perspective of resource based theory of the firm [102], [103], human resources are also regarded as a key resource of business competitive advantage because they are the skills, behaviour and values of staff that are paramount in sustaining high performance [96], and particularly they are difficult to replicate [104], [105]. In an empirical study conducted by Pfeffer [96], he presents that there is a direct positive relationship between companies' financial success and their commitment to HRM practices. After the investigation of a wide range of industries, Huselid also finds that HRM practices, including rigorous recruitment and selection procedures, development and training, performance-contingent compensation and information sharing are associated with lower employee turnover, greater productivity, and higher corporate financial performance [70].

After reviewed the empirical research on the HR – Performance relationship surveying 29 studies reporting 80 effect sizes (i.e., reported statistical relationships between HR practice and performance measures), they find that very few studies have introduced the human resource outcomes as dependent variables or mediators, many of which used accounting and financial market measures, and the largest number of effect sizes is observed for organizational outcomes in terms of productivity, quality, service, etc. Furthermore, numerous of studies have proved the evidence that strategic HRM used in the design of a set of consistent internal practices contribution to organizational performance [106], [107]. Thus, the following proposition is proposed:

P2: HRM strategy has a significant positive direct effect on business performance

C. KM Strategy

Since knowledge has been regarded as a strategic resource for an organization [17], [77] it is important to know about how to effectively manage various kinds of resources (e.g., people, process, IT) comply with knowledge. KM strategy is the right tool determining how to employ these various resources, thus, are regarded as the facilitators for KM outcomes [9], [10], [108].

In previous studies, KM strategy is classified by the nature of knowledge itself, e.g., explicit or tacit [76], [109]. Explicit knowledge refers to transfer information in a systematized manner whilst tacit knowledge refers to transfer information through social networks. These two concepts are similar to that of Hansen [10] classification of KM strategy as "codification strategy" which is also called "system strategy" and "personalization strategy" which is also called "Human strategy" respectively. While codification strategy seeks to retrieve and store knowledge in explicit form (e.g., in information systems or databases) that can be easily transferred and reused by anyone in the organizations; the personalization strategy, on the other hand, seeks to capture and share tacit knowledge that resides in human minds, behavior, and perception. It evolves from person-to-person interact extensively to obtain knowledge. In other words, organizations who employ system strategy attempt to share knowledge formally, conversely, those who employ human strategy attempt to share knowledge informally [17].

According to the perspectives of explicit-oriented and tacit-oriented, [68] classified KM methods into four styles, labeled dynamic, system-oriented, human-oriented, and passive. After empirical test from 54 Korean firms in the manufacturing, service, and financial industries, they indicate that dynamic style integrating explicit- oriented with tacit-oriented methods is found to have a significant impact on performance. In their case study of 31 different KM projects in 23 countries, [6] identify a four KM projects typology, namely knowledge repositories, knowledge access, knowledge environment, and knowledge assets. They further manifest the factors that lead to successful KM projects, including knowledge-oriented culture, technical and organizational infrastructure, senior management support, clarity of vision and language, linking KM to economic benefits, nontrivial motivational aids, multiple channels for knowledge transfer, and the level of knowledge structure. Finally, in a survey of 32 KM professionals, [110] indicates that the activities of KM value chain, including five primary knowledge activities (i.e., acquisition, selection, generation, integration, and externalization) and four secondary activities (i.e., leadership, coordination, control, and measurement), were found to have a positive relationship to competitive advantages in terms of perceived productivity, reputation, agility, and innovation. In sum, much evidences have been proved that develop a KM strategy provides a valuable opportunity to obtain a greater understanding of the way a business operates to foster their KM practices to success [111], [112]. Consequently, the following proposition is proposed:

P3: KM strategy has a significant positive direct effect on KM performance

It has been realized that successful KM projects will lead to overall organizational performance [6], [113]. However, such linkage is indefinite and difficult to validate clearly [15]. That is, it means that there is still an unexplored evidence to prove the direct relationship between knowledge-related antecedents and organizational performance, since lots of factors may contribution to the organizational performance [114]. Thus, an intermediate outcome (e.g., knowledge quality, user knowledge satisfaction, or organizational creativity) may be introduced as a mediator in the causal relationship [15].

P4: KM performance has a significant positive direct effect on business performance

D.IT Strategy

IT strategy is concerned with technology policies including questions of architecture, security levels, etc. [115]. In Henderson and Venkatraman's [42] strategic alignment model, IT strategy involves three components that should be articulated in terms of internal and external domains: information technology scope, systemic competencies, and IT governance. In the perspective of information-processing requirements, IT strategy has been conceptualized as a four-dimensional construct, namely competencies, role of IT, systems design and development, and infrastructures [87]. In the research, two dimensions are identified within IT strategy, the first one is IT environment scanning, representing the capability of a firm to detect and react to external changes in technology [116]; the second one is strategic use of IT, representing what extent a firm used IT to increase product quality and performance. In Earl's [115] research, he contends that there are three levels of IS-related strategy, labeled IM (information management) strategy, IS (information system) strategy, and IT (information technology) strategy, wherein IT strategy deals with the technology used for delivery of application systems and has been defined as "the portion of an organization's overall strategy that related to the IT groups." [116].

Numerous of successful stories involving strategic utilization of IT have been described in the literature [117]. While many researchers have indicated that IT has a significant positive direct effect on organizational outcome, however, enough of exceptions have been argued to contest with the argumentation [118]-[121]. This premise is similar to the influential processes of KM process-KM intermediate outcome-organizational performance aforementioned. As Henderson and Venkatraman [42] contend "Indeed, the key strategic IT management challenge lies in the identification of those strategic dimensions that require modification under different contingencies for enhancing organizational performance". It means that IT strategy should be aligned with its business strategy or other meaningful activities, thus, the direct maximum effectiveness for organizations can be achieved, or the performance would be formed by an indirect effect form IT strategy to business performance through IT outcome.

P5: IT strategy has a significant positive direct effect on IT performance

P6: IT performance has a significant positive direct effect on business performance

Furthermore, numerous of studies have pointed out that suitable IT implementations are enablers for effective KM activities [16]-[20]. For achieving KM performance requires

IT deployment well to enhance the KM outcome [122]. Thus, the following proposition is proposed:

P7: IT performance has a significant positive direct effect on KM performance

E. Strategic Alignment among Business Strategy, HRM Strategy, KM Strategy, and IT Strategy

As discussed in the prior research, ITs play a critical role to catalyze the movement of KM [6], [22]. Numerous of studies argue that proper IT solutions can enhance the speed of knowledge exploration and exploitation from individual to organizational members [21] [23], [30], [123]-[126]. However, owing to the complexity of KM initiatives and various kinds of IT techniques developed, business must pay more attentions to select these right IT solutions to deploy in supporting their KM initiatives [18]. It means that the match of IT and KM is an important concern for executives. Some researchers manifest that KM- related or IT-related variables alone are not sufficient for explaining organizational performance [18], since explanations based solely on KM or IT ignored the interactions of contingency variables as well as the synergy they produce [25]. As Fehér [127] indicated "On the strength of using knowledge management practices in organizational, that integration of technologies, techniques and theories of knowledge management, as well as internal environment, and organizational and IT strategy is definitely necessary". Despres and Chauvel [128] also indicate there are lots of contingency factors (e.g., organizational context, culture, knowledge carrier and media, knowledge transformation and dynamic, etc.) moderate the relationship between KM strategy and its performance in the implementation of a KM project. That is, one must adopts the "Demand pull" strategy in the consideration of different organizational context for identifying the proper KM strategy in a holistic perspective instead of the strategy of "Supply push" which is just as a unitary view. On the other hand, if various related contingent factors are not "strategic alignment" with strategy, the business can't manage and organize available resources. Hence, business performance would be lessened.

From the foregoing discussions, it is reasonable to assume that, Knowledge-related strategy should comply with business strategy for achieving organizational goals [26], [29], [31], [130]. Since KM is regarded as a useful instrument in implementing business strategy and their relationship can be seen as a balancing act between the external domain and the internal domain of a firm [9], [77]. Furthermore, Khalifa [22] indicate that KM effectiveness will be achieved in the condition of the adequacy of the KM structure which is affected by KM strategy, technology fit, organizational culture, and leadership. Shih and Chiang [76] also indicate that strategic alignment (fit) among KM strategy, corporate strategy, and HRM strategy are significantly related to better KM effectiveness in terms of process outcome, learning capability, and organizational outcomes. In addition, in the IT literature, Neo argues that interactions among IT and qualitative organizational variables strongly influenced IT performance [131]. In the perspective of resource-based view, Powell and Dent-Micallef [132] and Mata [133] also contend that ITs alone would not produced sustainable performance, combining certain human and business resources with ITs are the right way to explain significant performance variance.

Therefore, its is reasonable to contend that a positive business performance would be achieved if the strategic alignments between business strategy and IT strategy [36], [41], [42], [85], [115], [134] business strategy and KM strategy [31] , KM strategy and HRM strategy [71], IT strategy, HRM strategy [38], [136] and HRM strategy and Business strategy6 [38], [97], [98] are well conducted and aligned. Consequently, this present research assumes that there is something unique in effective organizations been created, in other words, in a certain business strategy (e.g., prospector, defender, analyzer, etc.) various patterns of HRM strategy, KM strategy, and IT strategy must be aligned for achieving organizational outcome. Therefore, the following propositions are proposed:

P8: The strategic alignment among Business strategy, HRM strategy, KM strategy and IT strategy has a positive direct effect on business performance

P9: The strategic alignment among Business strategy, HRM strategy, KM strategy and IT strategy has a positive direct effect on KM performance

P10: The strategic alignment among Business strategy, HRM strategy, KM strategy and IT strategy has a positive direct effect on IT performance

Therefore, the alignment model containing business strategy, HRM strategy, KM strategy, and IT strategy is proposed because of their reinforcement with each other and serving as the basis for performance (i.e., KM performance, IT performance, and business performance). The conceptual model underlying the present research is illustrated in Figure 8. It mainly extends Henderson and Venkatraman's [42] and Asoh's [31] model and other strategic alignment arguments into KM strategic alignment context, examining the relationship among business strategy, HRM strategy, KM strategy, and IT strategy at the business unit level. In the conceptual model, the strategic alignment among these strategies is hypothesized to affect KM performance, IT performance, and business performance measuring in market growth and profitability. Furthermore, the other two constructs namely KM performance (measuring in knowledge quality and user knowledge satisfaction) and IT performance (measuring in user information satisfaction and organizational impact) are also supposed to have direct effects on business performance.

Additionally, this present research is based on a major premise that it is important to retain the holistic nature of strategy alignment. This follows Van de Ven's argument of fit as "that characteristics of environmental niches and organizational forms that must be joined together in a particular configuration to achieve completeness in a description of a social system- like pieces of a puzzle must be put together in certain ways to obtain a complete image" (p. 323). We hope that the strategic alignment concept approach would not only provide more definitive answers about the nature of KM strategic alignment with a holistic perspective than the previous research did but also guide management practice in this important area.

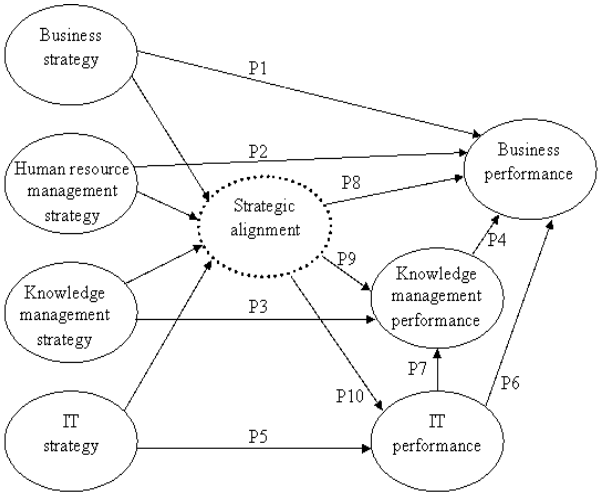

Figure 8 Conceptual model

IV. Conclusion

The field of KM is still in its infancy and a strategic alignment approach to the research dominates. Progress in the field has been hampered by the adoption of a narrow perspective on specific aspect of KM. This has resulted in highly ambiguous results, an inability for generalization in academic research and practical operation. Based on the premise that the business value from KM and IT investments requires strategic alignment among business strategy, KM strategy, and IT strategy, and the "systems" approaches are superior to "bivariate" approaches in strategic alignment model construction [29], thus, we developed a holistic KM strategy model (KMSAM) to analyze alternative strategic patterns with regard to KM performance and organizational performance.

Extension of this work would move in two directions. First, this model needs to be verified with empirical data in order to assess this KMSAM. Second, by conducting alternative perspectives of fit with statistical testing methods to verify what kinds of alignment has more significant effect on performance. Since alternative of alignments have their own underlying arguments and meanings, it would be beneficial that made this kinds of comparison for KM practice.

Acknowledgement

This study was funded by the Taiwan Ministry of Science and Technology under project number NSC 98-2410-H-214-004.

References

[1] Barney, J. B. "Looking Inside for Competitive Advantage," Academy of Management Executive (9:4), 1995, pp. 49-61.
[2] Barua, A., and Lee, B. "An Economic Analysis of the Introduction of an Electronic. Data Interchange System," Information Systems Research (8:4), 1997, pp. 398-422
[3] Croteau, A.M. and Bergeron, F. "An Information Technology Trilogy: Business Strategy, Techology Deployment and Organizational Performance," Journal of Strategic Information System (10:2), 2001, pp. 77-99.
[4] Scott, J.E. "Facilitating International Learning with Information Technology," Journal of Management Information Systems (17:2), 2000, pp. 81-113.
[5] Alavi, M. and Leidner, D.E. "Knowledge Management Systems: Issues, Challenges, and Benefits," Communications of the AIS (1:7), 1999, pp. 1-36.
[6] DeSanctis, G. and Poole, M.S. "Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory," Organization Science (5:2), 1994, pp. 121-147.
[7] Hansen, M.T., Nohria, N. and Tierney, T. "What's Your Strategy for Management Knowledge?" Harvard Business Review (77:2), 1999, pp. 106-116.
[8] Teece, D.J. "Capturing Value from Knowledge Assets," California Management Review (40:3), 1998, pp. 55-78.
[9] Zack, M.H. Epilogue: Developing a Knowledge Strategy. In C.W. Choo and Bontis (Ed.), the strategic Management of Intellectual Capital and Organizational Knowledge (pp. 268-276). Oxford University Press, Oxford, 2002.
[10] Henderson, J.C. and Venkatraman, N. "Strategic Alignment: Leveraging Information Technology for Transforming Organizations," IBM Systems Journal (38:2/3), 1999, pp. 472-484.
[11] Hustad, E. and Munkvold, B.E. "IT-Supported Competence Management: A Case Study at Ericsson," Information Systems Management (22:2), 2005, pp. 78-88.
[12] Keskin, H. "The Relationship between Explicit and Tacit Oriented KM Strategy, and Firm Performance," Journal of American Academy of Business, Cambridge (7:1), 2005, pp. 169-175.
[13] Kogut, B. and Zander, U. "Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology," Organization Science (3:3), 1992, pp. 383-397.
[14] Tippins, M.J. and Sohi, R.S. "IT Competency and Firm Performance: Is Organizational Learning a Missing Link?" Strategic Management Journal (24:8), 2003, pp. 745-761.
[15] Zack, M.H. "Managing Codified Knowledge," Sloan Management Review (40:4), 1999b, pp. 45-58.
[16] Alavi, M. and Leidner, D.E. "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues," MIS Quarterly (25:1), 2001, pp. 107-136.
[17] Ciborra, C. "De Profundis? Deconstructing the Concept of Strategic Alignment," IRIS conference, Retrieved April 14, 2006, http://iris.informatik.gu.se/conference/ iris20/60.htm, 1997.
[18] Kankanhalli, A., Tanudidjaja, F., Sutanto, J., and Tan B.C.Y. "The Role of IT in Successful Knowledge Management Initiatives," Communications of the ACM (46:9), 2003, pp. 69-73.
[19] Nonaka, I. and Konno, N. "The Concept of "ba": Building a Foundation of Knowledge Creation," California Management Review (40:3) 1998, pp: 40-54.
[20] Zahra, S.A. and Covin, J.G. "Business Strategy, Technology Policy and Firm Performance," Strategic Management Journal (14:13), 1993, pp. 7-32.
[21] Scott, J.E. "Facilitating International Learning with Information Technology," Journal of Management Information Systems (17:2), 2000, pp. 81-113.
[22] Khalifa, M., Lam, R. and Lee, M. "An Integrative Framework for Knowledge Management Effectiveness," Twenty-Second International conference on Information Systems, 2001, pp. 135-144.
[23] Sher, P.J. and Lee, V.C. "Information Technology as a Facilitator for Enhancing Dynamic Capabilities through Knowledge Management," Information & Management (41:8), 2004, pp. 933-945.
[24] Kim, S.K. "An Empirical Study of the Relationship between Knowledge Management and Information Technology Infrastructure Capability in the Management Consulting Industry," Unpublished Ph.D. dissertation, University of Nebraska, 2001.
[25] Schuler, R. S. and Jackson, S. E. "Linking Competitive Strategies with Human Resource Management Practices," Academy of Management Executive (1:3), 1987, pp. 207-219.
[26] Ulrich, D.O. "Intellectual Capital = Competence × Commitment," Sloan Management Review (39:2), 1998, pp. 15-27.
[27] Khalifa, M. and Liu, V. "Determinants of Successful Knowledge Management Programs," Electronic Journal on Knowledge Management (1:2), 2003, pp. 103-112.
[28] Bierly, P.E. and Daly, P. Alignment Human Resource Management Practices and Knowledge Strategies: A Theoretical Framwork, In C.W. Choo and Bontis (Ed.), the strategic Management of Intellectual Capital and Organizational Knowledge (pp. 268-276). Oxford University Press, Oxford, 2002.
[29] Chan, Y.E., Huff, S., Barclay, D.W. and Copeland, D.G. "Business Strategic Orientation, Information Systems Strategic Orientation, and Strategic Alignment," Information Systems Research (8:2), 1997, pp. 125-150.
[30] Truch, E. and Bridger, D. "The Important of Strategic Fit in Knowledge Management," European Conference on Information Systems, Gdansk, Poland, 2002, pp. 905-918.
[31] Asoh, D.A. Business and Knowledge Strategies: Alignment and Performance Impact Analysis, Unpublished Ph.D. dissertation, University of New York, 2004.

[32] Zahra, S.A. and Pearce II, J.A. “Research Evidence on the Miles and Snow Typology,” Journal of Management (16:4), 1990, pp. 751-768.
[33] Hendriks, P.H.J. and Vriens, D.J. “Knowledge-based systems and knowledge management: friends or foes?” Information & Management (35:2), 1999, pp. 113-125.
[34] Wright, P.M., McCormcik, B., Sherman, W., and McMahon, G. “The Role of Human Resource Practices in Petro-Chemical Refinery Performance,” International Journal of Human Resource Management (10:4), 1999, pp. 551-571.
[35] Wright, P. M., McMahan, G. C., and McWilliams, A. “Human Resources and Sustained Competitive advantage: A resource-Based Perspective,” International Journal of Human Resource Management (5:2), 1994, pp. 301–326.
[36] Drazin, R. and Van de Ven, A.H. “Alternative Forms of Fit in Contingency Theory,” Administrative Science Quarterly (30:4), 1985, pp. 514-539.
[37] Tiwana, A. The Knowledge Management Toolkit: Practical Techniques for Building a Knowledge Management System, Prentice Hall, Upper Saddle River, NJ, 2000.
[38] Miles, R.E. and Snow, C.C. “Designing Strategic Human Resource Systems,” Organizational Dynamics (13:1), 1984b, pp. 36-52.
[39] ３９◦ Earl, M.J. Integrating IS and the organization: A Framework of Organizational fit, In: Earl, M.J. (Ed.), Information Management: the Organizational Dimension. Oxford University Press, Oxford, 1996.
[40] Broadbent, M.D. and Weill, P. “Improving Business and Information Strategy Alignment: Learning from the Banking Industry,” IBM Systems Journal (32:1), 1993, pp. 162-179.
[41] Choi, B. and Lee, H. “An Empirical Investigation of KM Styles and Their Effect on Corporate Performance,” Information & Management (40:5), 2003, pp. 403-417.
[42] Henderson, J.C. and Venkatraman, N. “Strategic Alignment: Leveraging Information Technology for Transforming Organizations,” IBM Systems Journal (38:2/3), 1999, pp. 472-484.
[43] Luftman, J.N., Lewis, P.R. and Oldach, S.H. “Transforming the Enterprise: The Alignment of Business and Information Technology Strategies,” IBM Systems Journal (32:1), 1993, pp. 198-221.
[44] Powell, T.C. and Dent-Micallef, A. “Information Technology as Competitive Advantage: The Role of Human, Business, and Technology Resources,” Strategic
[45] Wiig, K.M. Knowledge Management Methods: Practical Approach to Managing Knowledge, Schema press, Texas, 1995.
[46] Conner, K.R. “A Historical Comparison of the Resource-Based Theory and Five Schools of Thought within Industrial Organization Economics: How I Have a New Theory of the Firm,” Journal of Management (17:1), 1991, pp. 121-154.
[47] Luftman, J.N., Papp, R., and Brier, T. “Business and IT in Harmony: Enablers and Inhibitors to Alignment,” Americas Conference on Information Systems 1996.
[48] Luftman, J.N. “Align in the Sand,” Computerworld Leadership Series (3:2), 1997, pp. 1-11.
[49] Spender, J.C. and Grant, R.M. “Knowledge and the Firm: Overview,” Strategic Management Journal (17: Special issue), 1996, pp. 5-9.
[50] Hoffman, J.J., Hoelscher, M.L. and Sherif K. “Social Capital, Knowledge Management, and Sustained Superior Performance,” Journal of Knowledge Management (9:3), 2005, pp. 93-100.
[51] Richard, O.C., and Johnson, N. B. “Strategic human resource management effectiveness and firm performance,” International Journal of Human Resource Management, (12:2), 2001, pp. 299-310.
[52] Venkatraman, N. “The concept of fit in strategy research: toward verbal and statistical correspondence,” The Academy of Management Review (14:3), 1989a, pp. 423-444.
[53] ５４◦ Wang, W.T. and Belardo, S. “Strategic Integration: A Knowledge Management Approach to Crisis Management,” Proceedings of the 38th Hawaii International Conference on System Sciences, 2005.
[54] Wiig, K.M. Knowledge Management Foundations: Thinking about Thinking- How People and Organizations Create, Represent, and Use Knowledge, Schema Press, Arlington, Texas, 1993.
[55] Earl, M.J. Management Strategies for Information Technology, Prentice Hall, New York, 1989.
[56] Quinn, J.B. and Baily, M. “Information Technology,” Brookings Review (12:3), 1994, pp. 36-41.
[57] Robertson, J. “Developing a Knowledge Management Strategy,” KM Column, August 2004, Retrieved in July 10, 2006, http://www.steptwo.com.au/papers /kmc_kmstrategy/index.html.
[58] Lee, Y., Lee, Z. and Gosain, S. “The Evolving Intellectual Diversity of the IS Discipline: Evidence from Referent Theoretical Frameworks,” Communications of AIS (13:32), 2004, pp. 546-579.
[59] Woolfe, R. “The Path to Strategic Alignment,” Information Strategy: the Executive Journal (9:2), 1993, pp. 13-23.
[60] Azab, N.A. “Investigating IT-Business Alignment in an Egyptian Medium-Sized Enterprise,” European and Mediterranean Conference on Information Systems (EMCIS) 2005, Cairo, Egypt.
[61] Gottschalk, P. “Predictors of Information Technology Support for Inter-organizational Knowledge Management: Lessons Learned from Law Firms in Norway,” Knowledge and Process Mangement (8:3), 2001, pp. 186-194.
[62] Luftman, J.N. and Brier, T. “Achieving and Sustaining Business-IT Alignment,” California Management Review, (42:1), 1999, pp. 109-122.
[63] Earl, M.J. Integrating IS and the organization: A Framework of Organizational fit, In: Earl, M.J. (Ed.), Information Management: the Organizational Dimension. Oxford University Press, Oxford, 1996.
[64] Luftman, J.N., Papp, R., and Brier, T. “Enablers and Inhibitors of Business-IT Alignment,” Communications of the Association for Information Systems (1:11), 1999, pp. 1-33.
[65] Papp, R. “Alignment of Business and Information Technology Strategy: How and Why?” Information Management (11:3/4), 1998, pp. 6-11.
[66] Asoh, D.A., Belardo, S. and Duchessi, P. “Alignment: The Missing Link in Knowledge Management Research,” Proceedings of the 4th European Conference on Knowledge Management, Oriel, Oxford, 2003, pp. 39-47.
[67] Becerra-Fernandez, I. and Sabherwal, R. “Organizational Knowledge Management: A Contingency Perspective,” Journal of Management Information Systems (18:1), 2001, pp. 23-55.
[68] Carr, N.G. “IT doesn’t Matter,” Harvard Business Review (81:5), 2003, pp. 41-49.
[69] Uzzi, B. and Lancaster, R. “The Role of Relationship in Interfirm Knowledge Transfer and Learning: The Case of Corporate Debt Markets,” Management Science (49:4), 2003, pp. 383-399.
[70] Huselid, M.A. “The impact of human resource management practices on turnover, productivity, and corporate financial performance,” Academy of Management Journal (38:3), 1995, pp. 635-72.
[71] Cabrera, E.F. and Bonache, J. “An Expert HR System for Aligning Organizational Culture and Strategy,” Human Resource Planning (22:1), 1999, pp. 51-60.
[72] Grant, R.M. “Prospering in Dynamically Competitive Environments: Organizational Capability as Knowledgelintegration,” Organizational Science (7:4), 1996, pp. 375-387.
[73] Diakoulakis, I.E., Georgopoulos N.B., Koulouriotis, D.E., and Emiris, D.M. “Towards a Holistic Knowledge Management Model,” Journal of Knowledge Management (8:1), 2004, pp. 32-46.
[74] Im, G. and Raven, A. “Fit and Social Construction in Knowledge Management Systems,” Proceedings of the 11th European Conference on Information Systems, Naples, Italy, 2003.
[75] Weill, P. and Broadbent, M. Leveraging the New Infrastructure: How Market Leaders Capitalize on Information Technology, Harvard Business School Press, Boston, 1998.
[76] Singh, M. Toward a Knowledge Management View of Electronic Business: Introduction and Investigation of the Knowledge Chain Model for Competitive Advantage, Unpublished Dissertation, University of Kentucky, Lexington, Kentucky, 2000.
[77] Abou-Zeid, E. Developing Business Alignment Knowledge Management Strategy, In E. Coakes (Ed.), Knowledge Management: Current Issues and Challenges (pp. 157-173), Hershey: Idea Publishing Group, Hershey, PA, 2003.
[78] Miles, R.E. and Snow, C.C. Organizational Strategy, Structure, and Process. New York: McGraw-Hill, 1978.
[79] Powell, T.C. “Organizational Alignment as Competitive Advantage,” Strategic Management Journal (13:2), 1992, pp. 119-134.
[80] Watson, R.T., Kelly, G.G., Galliers, R.D. and Brancheau, J.C. “Key Issues in Information Systems Management: An International Perspective,” Journal of Management Information Systems (13:4), 1997, pp. 91-115.
[81] Zahra, S.A. and Pearce II, J.A. “Research Evidence on the Miles and Snow Typology,” Journal of Management (16:4), 1990, pp. 751-768.
[82] Smith, K.G., Guthrie, J.P. and Chen, M.J. “Strategy Size and Performance,” Organizational Studies (10:1), 1989, pp. 63-81.

[83] Das, S.R., Zahra, S.A., and Warkentin, M.E. "Integrating the Content and Process of Strategic MIS Planning with Competitive Strategy," Decision Sciences (22:5), 1991, pp. 953-984.
[84] Davenport, T.H. and Prusak, L. Working Knowledge: How Organizations Manage What They Know, Massachusetts: Harvard Business School Press, Boston, 1998.
[85] Sabherwal, R. and Sabherwal, S. "Knowledge Management Using Information Technology: Determinants of Short-term Impact on Firm Value," Decision Science (36:4), 2005, pp. 531-567.
[86] Despres, C. and Chauvel, D. Knowledge, Context, and the Management of Variation, in Choo, C.W. and Bontis, N. (Eds.), The Strategic Management of Intellectual Capital and Organizational Knowledge, New York: Oxford University Press, 2002.
[87] Delery, J. and Doty, D.H. "Modes of Theorizing in Strategic Human Resource management: Tests of universalistic, contingency, and configurational performance predictors," Academy of Management Journal (39:4), 1996, pp. 802-835.
[88] Smaczny, T. "Is an Alignment between Business and IT the Appropriate Paradigm to Manage IT in Today's Organization?" Management Decision (39:10), 2001, pp. 797-802.
[89] Venkatraman, N. "Strategic Orientation of Business Enterprises: The construct, Dimensionality, and Measurement," Management Science (35:8), 1989b, pp. 942-962.
[90] Venkatraman, N. "Strategic Orientation of Business Enterprises: The construct, Dimensionality, and Measurement," Management Science (35:8), 1989b, pp. 942-962.
[91] Miller D. "Strategy Making and Structure: Analysis and Implications for Performance," Academy of Management Journal (30:1), 1987, pp. 7-32.
[92] Polanyi, M. (1997) 'The Tacit Dimension', in L. Prusak (Eds.): Knowledge in Organizations (pp. 135-146), Butterworth-Heinemann, Boston.
[93] Zahra, S.A. and Covin, J.G. "Business Strategy, Technology Policy and Firm Performance," Strategic Management Journal (14:13), 1993, pp. 7-32.
[94] Hustad, E. and Munkvold, B.E. "IT-Supported Competence Management: A Case Study at Ericsson," Information Systems Management (22:2), 2005, pp. 78-88.
[95] Zack, M.H. "Developing a Knowledge Strategy," California Management Review (41:3), 1999a, pp. 125-145.
[96] Porter, M.E. Competitive Strategy. New York: Free Press, 1980.
[97] Agarwal, R. and Freeatt, T.W. "Crafting an HR Strategy to Meet the Need for IT Workers," Communications of the ACM (44:7), 1999, pp. 58-64.
[98] Ulrich, D.O. and Lake, D. Organizational Capability: Competing from Inside Out, John Wiley & Sons, Canada, 1990.
[99] Bhatt, G.D. and Grover, V. "Types of Information Technology Capabilities and Their Role in Competitive Advantage: An Empirical Study," Journal of Management Information Systems (22:2), 2005, pp. 253-277.
[100] Jackson, S.E. and Schuler, R.S. Understanding Human Resource Management in the Context of Organizations and Their Environment, in: Rosenzweig, M.R. and Porter, L.W. (Eds.), Annual Review of Psychology, Palo Alto, CA: Annual Reviews, pp. 237-264, 1995.
[101] Bae, J., Chen, S. and Lawler, J.J. "Variations in Human Resource Management in Asia Countries: MNC Home-Country and Host-Country Effects," The International Journal of Human Resource Management (9:4), 1998, pp. 653-669.
[102] Becerra-Fernandez, I. and Sabherwal, R. "Organizational Knowledge Management: A Contingency Perspective," Journal of Management Information Systems (18:1), 2001, pp. 23-55.
[103] Lado, A.A. and Wilson M.C. "Human resource systems and sustained competitive advantage: A competency-based perspective," Academy of Management Review (19:4), 1994, pp. 699-727.
[104] Ruiz-Mercader, J., Meroño-Cerdan, A.L., and Sabater-Sánchez, R. "Information Technology and Learning: Their Relationship and Impact on Organizational Performance in Small Business," International Journal of Information Management (26:1), 2006. pp. 16-29.
[105] Yu, S.H., Kim, Y.G. and Kim, M.Y. "Linking Organizational Knowledge Management Drivers to Knowledge Management Performance: An Exploratory Study," Proceedings of the 37th Hawaii International Conference on System Sciences, 2004.
[106] Sher, P.J. and Lee, V.C. "Information Technology as a Facilitator for Enhancing Dynamic Capabilities through Knowledge Management," Information & Management (41:8), 2004, pp. 933-945.
[107] Henderson, J.C. and Sifonis, J.G. "The Value of Strategic IS Planning: Understanding Consistency, Validity, and IS Markets," MIS Quarterly (12:2), 1988, pp. 187-201.
[108] Bergeron, F., Raymond, L., and Rivard, S. "Ideal Patterns of Strategic Alignment and Business Performance," Information & Management (41:8), 2004, pp. 1003-1020.
[109] Porter, M.E. "What is Strategy?" Harvard Business Review (Nov/Dec), 1996, pp. 61-78.
[110] Goodhu, D.L. and Thompson, T.L. "Task-technology Fit and Individual Performance," MIS Quarterly (19:2), 1995, pp. 213-236.
[111] Garavelli, C., Gorgoglione, M., and Scozzi, B. "Knowledge Management Strategy and Organization: A Perspective of Analysis," Knowledge and Process Management (11:4), 2004, pp. 273-282.
[112] Sabherwal, R. and Chan, Y.E. "Alignment between Business and IS Strategies: A Study of Prospectors, Analyzers and Defenders," Information Systems Research (12:1), 2001, pp. 11-33.
[113] Argote, L. and Ingram, P. "Knowledge Transfer: A Basis for Competitive Advantage in Firms," Organizational Behavior and Human Decision Processed (82:1), 2000, pp. 150-169.
[114] Pan, S.L. and Leidner, D.E. "Bridging Communities of Practice with Information Technology in Pursuit of Global Knowledge Sharing," Journal of Strategic Information Systems (12:1), 2003, pp. 71-88.
[115] Fehér, P. "The Missing Link in the Integration of Knowledge Management Practices and Technology Solutions," European Conference on Information Systems, Gdansk, Poland, 2002, pp. 939-950.
[116] Blanton, J.E., Watson, H.J., and Moody, J. "Toward a Better Understanding of Information Technology Organization: A comparative Case Study," MIS Quarterly (16:4), 1992, pp. 531-555.
[117] Schultz, W.S. "The Two Resource-Based Models of the Firm: Definitions and Implications for Research," Academy of Management Best Papers Proceedings, 1992, pp. 37-41.
[118] Beckman, T. The current State of Knowledge Management, In Liebowitz (Ed.), Knowledge Management Handbook, CRC Press, Boca Raton, 1999, pp. 1-22.
[119] Markus, M.L. and Soh, C. Banking on Information Technology: Converting IT Spending into Firm Performance, in: Banker, R.D., Kauffman, R.J., and Mahmood, M.A. (Eds.), Perspective s on the Strategic and Economic Value of Information Technology Investment, Ideal Group Publishing, 1993, pp. 364-392.
[120] Reich, B. and Benbasat, I. "Factors that influence the Social Dimension of Alignment between Business and Information Technology Objectives," MIS Quarterly (24:1), 2000, pp. 81-113.
[121] Clemons, E.K. and Row, M.C. "Sustaining IT Advantage: The Role of Structural Fifferences," MIS Quarterly (15:3), 1991, pp. 341-352.
[122] Mahapatra, R.K. and Sarkar. "The Role of Information Technology in Knowledge Management," Proceedings of the American Conference on Information Systems, Long Beach, California, 2000, pp. 1288-1290.
[123] Sabherwal, R. and Grant, J.H. Integrating External and Internal Perspectives of Strategic Information Technology Decisions, in: Research in Strategic Management and Information Technology, N. Venkatraman and J. Henderson (Eds.), 1994, JAI Press, England.
[124] Choi, B. and Lee, H. "Knowledge Management Strategy and Its Link to Knowledge Creation Process," Expert Systems with Applications (23), 2002, pp. 173-187.
[125] Parnell, J.A., Wright, P. and Tu, H.S. "Beyond the Strategy-performance Linkage: The Impact of the Strategy-organizational-environment Fit on Business Performance," American Business Review (14:2), 1996, pp. 41-50.
[126] Guest, D.E. "Human Resource Management and Performance: A Review and Research Agenda," Then International of Human Resource Management (8:3), 1997, pp. 263-276.
[127] Garavelli, C., Gorgoglione, M., and Scozzi, B. "Knowledge Management Strategy and Organization: A Perspective of Analysis," Knowledge and Process Management (11:4), 2004, pp. 273-282.
[128] Doty, D.H., Glick, W.H., and Huber, G.P. "Fit, Equifinality, and Organizational Effectiveness: A Test of Two Configurational Theories," Academy of Management Journal (36:6), 1993, pp. 1196-1250.
[129] Van de Ven, A.H. and Drazin, R. "The Concept of Fit in Contingency Theory," Research in Organizational Behavior (7), 1985, pp. 333-365.
[130] Ostroff, C. and Schmitt, N. "Configurations of Organizational Effectiveness and Efficiency," Academy of Management Journal (36:6), 1993, pp. 1345-1361.
[131] Neo, B.S. "Factors Facilitating the Use of Information Technology for Competitive Advantage: An Exploratory Study," Information &

Management (15:4), 1988, pp. 191-201.
[132] Reich, B. and Benbasat, I. "Measuring the Linkage between Business and IT Objectives," MIS Quarterly (20:1), 1996, pp. 767-783.
[133] Mata, F.J., Fuerst, W.L. and Barney, J.B. "Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis," MIS Quarterly (19:4), 1995, pp. 487-505.
[134] Palmer, J.W. and Markus, M.L. "The Performance Impacts of Quick Response and Strategic Alignment in Specialty Retailing," Information Systems Research (11:3), 2000, pp. 241-259.
[135] Gold, A.H., Malhotra, A., and Segars, A.H. "Knowledge Management: An Organizational Capabilities Perspective," Journal of Management Information Systems (18:1), 2001, pp. 185-214.
[136] Cecez-Kecmanovic, D. "A Sensemaking Model of Knowledge in Organizations: A Way of Uniderstanding Knowledge Management and the Role of Information Technologies," Knowledge Management Research & Practice (2:3), 2004, pp. 155-168.

Chao-Yen Wu is an Associate Professor at the Department of Information Management in the I-Shou University, Taiwan. He received his Ph.D. degree from the University of Arizona major in Systems Engineering and minor in Management Information Systems, Tucson, Arizona, USA..

Yue-Yang Chen is the corresponding author and is an Associate Professor at the Department of Business Administration in the I-Shou University, Taiwan. He received his Ph.D. degree from National Kaohsiung First University of Science and Technology at the School of Management, Taiwan. His current research interests include knowledge management, online consumer behavior, and strategic alignment analysis. He has published his research in Journals such as Journal of Computer Information Systems, Computers & Education, Journal of Knowledge Management.

Wen-Hsin Fang is an Assistant Professor at the Department of Business Administration in the I-Shou University, Taiwan. He received his Ph.D. degree from Cranfield University at the Manufacturing Quality Systems, UK. His current research interests include manufacturing management and supply chain management.

Shih-FU Sung is a doctoral student at the Information Engineering in the I-Shou University, Taiwan.