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[Field Research]

Study on the Post-Merger Integration of IT Systems in the Retail Industry: The Case of M&A of a Department Store*

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Abstract

Purpose - This study aimed to examine how the integration of IT systems was applied in the merger and acquisition (M&A) process in a Korean retail industry, based on the conceptual framework of a combination of related, existing literature.

Research design, data, methodology – We employed the case study method, which involved literature reviews and interviews. We conducted a documentary survey and interviews regarding the M&A case for company A.

Results – Company A had an integration strategy and plan with IT expertise before it began integrating both IT systems in D-Day. The IT integration of both systems was completed efficiently and effectively. Company A utilized not just one but all integration options, which was done in stages and according to situation.

Conclusions - Companies should develop an integration strategy and have a clear integration plan with IT expertise in order to achieve successful integration. Companies trying to integrate IT systems during an M&A process can utilize all integration options in consideration of their business context and IT system conditions.

Keywords : M&A, Integration of IT Systems, Integration Planning, Integration Model.

JEL Classifications : M10, M16, L10. L20.

1. Introduction

Many companies in the world have implemented survival and growth strategies through mergers and acquisitions (M&A). In South Korea, restructuring through M&A appeared after the IMF financial crisis in 1997. M&A cases have shown up in various fields in Korea since the year 2000.

Many domestic and foreign studies emphasize the achievement of corporate strategic targets and an increase of enterprise value through empirical reviews which assess the success and failure factors of M&A as well as case studies which demonstrate how to conduct the M&A process(Lajoux, 1997). Especially, existing studies have stressed that post-merger integration is the most important stage in M&A success (Habeck et al, 2000) in the whole M&A process including pre-merger, merger, and post-merger integration (Shimizu et al, 2004) and that integration of organizational cultures between companies is difficult as well as crucial.

Companies that cultivate acquisitions should look to consolidate functions such as finance/accounting, sales/marketing, and personnel/human resources in the integration process of the two companies by stages. Also, information systems that support these functions should be integrated. Specifically, the integration of information systems means combining the functional task processes with related-business data across both companies. For this reason, integration of information systems during the M&A process can achieve some physical integration of business operations between the companies.

Generally, companies pursue both growth, such as market and customer expansion, and efficiency, which can achieve economies of scale and scope (Sejin Jang, 2010). The task of information system integration conducted by both companies during the M&A process should achieve not only economies of scale and scope, but also the goals of the organization in the long run throughout integration. As the task of integrating information systems not only takes money and time but also presents uncertainty due to an absence of standards for such system integrations, companies which conduct M&A regard post-merger integration as one of the most difficult processes.

Studies on information system integration required for the M&A process are grouped into models focused on the integration of information systems of both companies and those focused on influence factors affecting the achievement of information system integration. The main studies on information system integration of both companies are those that suggest models that classify types of information system integration through the investigation of M&A cases (Giacomazzi et al, 1997; Johnston & Yetton, 1998). Studies focused on influence factors for the achievement of information system integration suggest major variances that should be considered during the process of information system integration (Weber & Pliskin, 1996; Stylianou et al., 1996). However, studies that target Korean companies

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are needed since most of the existing research focuses on the M&A process of foreign companies. Especially, there is a dearth of research on information system integration focused on Korean companies having a successful M&A track record over 10 years.

This study establishes a theoretical frame through the combination of existing study results related to information system integration conducted during the M&A process along with how integration is applied in the M&A process in Korean company case studies. Furthermore, it explores how theories on information system integration during the M&A process are applied to business management and draws an implication from these case studies.

2. Theoretical Background and Research Approach

2.1. Theoretical Background of the Study

Giacomazzi et al. (1997) suggested a model of information system integration during the M&A process by investigating 98 M&A cases to examine types of information system integration. This study divided information system integration models into complete integration strategy, partial integration strategy, transition strategy, and non-integration. It then suggested six integration strategies based on the degree of centralization of the information system architecture (Totally Centralized vs Partially Distributed vs Totally Distributed), and degree of standardization of the applications (software) used, (Totally Standardized vs Partially Standardized vs Adapted). A similar study which suggested a model of information system integration of both companies by examining M&A cases of banks (Johnston & Yetton, 1998) classified the model of information system integration during the M&A process into best of breed, absorption, and co-existing. It also stated that the choice of information system integration model is highly influenced by information system compatibility of both companies, motive for M&A, and goal of information system integration.

There is a research about the factors influencing integration performance of IT systems. A study shows that IT intensity of both industry, differences of organizational culture between both companies can have a effect on the integration performance of IT systems of both companies (Weber & Pliskin, 1996). Another study suggested integration planning, IT expertise participation, the changes of IT system policy & procedures and compatibility of data & hardware influence the integration performance of IT systems of both companies (Stylianou et al., 1996). These studies concentrated on the relationship between the variables such as IT intensity of both industry and compatibility of data & hardware and the variables such as integration performance of IT systems of both companies.

There is a domestic research suggesting a model of IT system integration during the M&A process by case study to present types of IT system integration such as Best of breed, Blow-Away, Data Integration (Lee, 2001). A study on the factors influencing informations systems integration performance in mergers and acquisitions shows that not only the factors can influence the integration performance but also overall M&A performance (Kim et al., 2001)

2.2. Conceptual Framework and Methodology

This study devised a conceptual framework by reviewing the literatures about IT system integration and analyzed the case that A company acquired and merged B company in retail industry. For this, this study adopted the IT system integration model suggesting absorption, best of breed and co-existence options (Johnston & Yetton, 1998) and identified the factors influencing IT system integration performance in terms of integration planning, IT expertise participation, IT system policies & procedures and compatibility of data & hardware (Stylianou et al., 1996). Also this study divides the phase for integration because it takes long for both companies to integrate their IT systems.

This study employs an empirical research methodology by examining a case study, as this method is convenient for not only the theoretical application and understanding of the real management but also determining implications and conducting an in-depth analysis

This case study was conducted by interviewing key stakeholders and analyzing the internal data of an enterprise. While maintaining the narrative form, this case study attempts to identify implications and analyze the main contents based on the theoretical framework summarizing the existing theories for IT system integration during M&A process.

The theoretical framework for case analysis was devised based on the literature reviews, as shown in <Fig. 1>.

	Pre-M&A Srage	Post-M&A Stage
Intergration Model of both Information System	Absorption Co-existence	Best of breed New System Development
Main Factors Influencing Intergration Performance	Absorption Co-existence	Best of breed New System Development

<Figure 1> Theoretical Framework for the Case Study

3. Case Study : Integration of IT Systems of Both Companies

The A company got a position of first candidate for acquiring B company in November, 2006. After this, the A company organized PMI (Post-Merge Integration) team for due diligence and integration planning.

The PMI team divided by sales & marketing, finance & accounting, human resource & organization and IT systems. The IT system part of PMI team not only started planning for integration of both IT systems before D-Day but also executed and completed the project of IT system integration after D-day.

This case study was composed of four parts. First part is the IT systems of both companies for understanding the differences of both IT systems and the constraints of IT integration. Second part is about the integration planning conducted by A company. Third part is the integration process of both IT systems from developing new IT systems to applying all the integrated systems to the company. Final part is the case analysis based on the conceptual framework for this study.

3.1. IT systems of Both Companies

The differences of both IT systems can be summarized with the view of IT strategy, IT system and IT management, as shown in <Table 1>. The A company understood the gap of IT competences between A company and B company and realized that they needed a new IT strategy for long-term integrations and synergies.

<Table 1> Summary of Both IT Systems

		A Company	B Company
IT Strategy	IT Strategy and Plan	- No IT Strategy - Only Annual IT Plan	Formulate IT Strategy and Planning Periodically
	IT Investment	- Small amt. of IT Investment - Few IT Investment for New Sys.	- Large amt. of IT Investment - Other IT Investment for New Sys.
IT Systems	Application	- Good Business Coverage - Middle System Integration between IT Systems	- Better Business Coverage - High System Integration between IT Systems
	IT Infra	- Old IT System Infra - C/S Environment,	- Continuous Infra Improvement - Web Environment
	System Operation	Insource Internal IT Staff and Organization	Outsource External IT Specialist and Organization
IT Management	IT Organization	Operated by Functions such as Sales, Support and Store	Operated by overall IT Strategy and Planning
	IT Process	Few formal standardized IT Process and Procedures	Formal standardized IT Process and Procedures from Plan to operation

The A company had the constraints that the finance, HR and groupware systems of B company was useful only for six months according to the M&A agreement and the sales system of B company was out sourced by other IT company.

3.2. Integration Planning for IT Systems

The A company considered three for integration planning for both IT systems such as the goal of IT integration, the possibilities of reuse of existing systems and the options of integration model.

After conducting the analysis of both systems, the A company set the goal of those IT system integration not for cost reduction or efficiency but for advanced business enabler of future business and organization.

The PMI team realized the need for developing new systems of sales, finance, HR and groupware systems first because they had constrains for use of those IT systems continuously. They had to plan the IT systems integration by phase.

There are three options for integration model of both IT systems such as A company–driven integration, B company-driven integration and all new system development. The co-existence option was not considered because A company had a plan of complete integration of both companies from organization & business process to store brand.

The analysis of integration options can be summarized in terms of business coverage, best practice adoption, system stability, ease of implementation and cost of construction as shown in <Table 2>.

<Table 2> Analysis of Integration Options

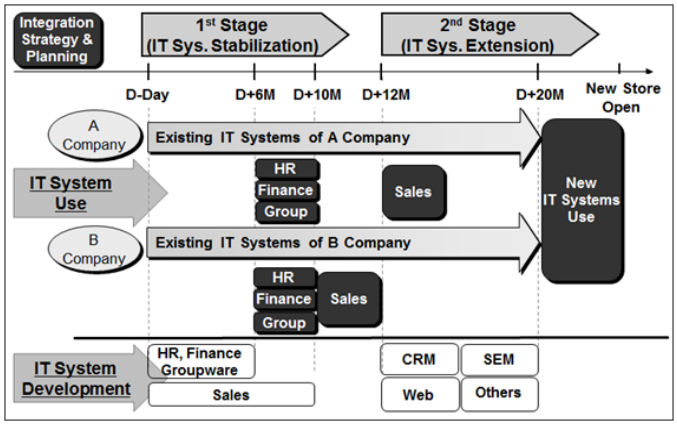
		A Company-Driven	B Company-Driven	New System
business coverage		Bad	Average	Good
best practice adoption,		Bad	Average	Good
system stability		Good	Average	Bad
ease of implementation		Bad	Average	Good
cost of construction	Short-Term	Good	Average	Bad
	Long-Term	Bad	Bad	Good

The PMI team of A company selected the 'New System Development' option as the integration model because that option had many advantages over the other options except for system stability and short-term cost.

3.3. Integration Process of Both IT Systems by Phase

The A company started the integration project for both IT systems after they completed the M&A agreement in March, 2007. The system integration projects were phased by two stages according to their integration strategy and plan that is devised before D-Day.

The overall integration process of both IT systems can be summarized in terms of both IT system use and IT system development based on integration steps, as shown in <Fig. 2>.



<Figure 2> Integration Process of Both IT Systems

The A Company formulated integration strategy and planned integration tasks of both IT Systems before D-Day. The project team for IT system integration started system development after D-Day and applied the systems of each business areas for both company by stages.

3.4. Case Analysis

This case can be analyzed based on the theoretical framework for this study as follows.

First, the A company utilized all integration model of IT system

integration for M&A process such as co-existence, absorption and best of breed although it selected new system development model for final integration. Many research presented IT system integration model for M&A process and it said that a company can select one of the integration options for its post-merger integration of IT areas. This case shows that the company pursuing IT system integration of M&A process can utilize all of integration options by stages. Moreover, this case shows that the 'New System Development' option can be one of the options for IT system integration model for M&A process. The A company had to consider 'New System Development' option for integration of both IT systems because it could not utilize some application systems such as HR, Finance and Groupware system according to the M&A agreement.

Second, the A company formulate Integration strategy of both IT systems and planned detail integration stages and tasks such as IT system development and phased application before D-Day. As many research shows integration planning is one of the factors influencing post-merger integration performance, the A company had a integration strategy and plan before it started execution of integration of both IT systems in D-Day, the integration project team reduced trials and errors and completed the IT integration of both systems efficiently and effectively. The PMI (Post Merger Integration) team members are organized with not only internal IT Staffs of both companies but also external IT Consultants. They had IT expertise for both Integration planning and execution and completed the IT Systems integration project successfully. It shows that IT expertise participation can have a effect on the performance of IT systems integration of M&A process.

Despite the fact that this study did not deal with IT policies & procedures and IT compatibility of data & hardware in detail, the key stake holders of this case said that they had difficulty in handling the differences between the IT policies and systems of both companies, which took longer for them to complete the integration project. It also shows that both IT policies & procedures and compatibility of data & hardware are important for the performance of IT systems integration.

4. Conclusions

4.1. Summary and Implications

This study aimed to examine how the integration of IT systems is applied in the M&A process in Korean company based on the conceptual framework through the combination of existing study results related to information system integration conducted during the M&A process. For this, it explores how theories on information system integration during the M&A process are applied to post-merger integration case of A company and identifies another factors such as constraints of systems reuse and 'New System Development'option for IT systems integration.

The conclusions and implications of this study are summarized as follows in terms of theoretical framework for this study and business case.

First, companies should have their own integration strategy and clear integration plan with IT expertise to achieve not only the performance of integration for both IT systems but also their M&A goals and organizational synergy. The A company formulate Integration strategy of both IT systems and planned detail integration stages and tasks such as IT system development and phased application before D-Day with both internal IT Staffs and external IT specialists.

Second, M&A cases have so many diverse environments in that there are so many constraints and variables for decision-makings above the related theories, which can require another plan and execution based on the customized judgments and decisions. The A company selected new system development model for final integration as well as utilizing all integration model of IT system integration for M&A process such as co-existence, absorption and best of breed because of the constraints and variables of IT systems integration.

Finally, post-merger integration process of both IT systems should focus on not only utilizing the competences of both companies but also new IT strategy for long-term integrations and synergies. The A company formulated new IT strategic planning for their integration planning and execution, which enabled it to complete the long-term integration project over two years successfully in spite of many issues of business & IT systems.

4.2. Limitations & Further Research

This study has some values in terms of providing detail review and analysis of the integration processes of both IT systems in post-merge integration of M&A and applying the theories to real business case, resulting in identifying analyzing the key decision making areas of those processes, there are some limitations and further research areas for overcoming or supplementing these limitations as follows.

First, this study has the limit for generalization and few theoretical contributions such as the development of new propositions or theories because it is for only one company. Further research is needed for overcoming these limitations such as multiple case studies on this subject which can provide generalization and contributions of theory better.

Second, the methodology of this research is insufficient in terms of the rigorousness of case study because this case was developed and analyzed centered on document research of internal sources, although some interviews were conducted with relevant individuals. Because a case study is a methodology that emphasizes in-depth analysis of the subject and suggests implications, further research is needed to be more structured for describing, analyzing and explaining the case in term of business contexts and related theories.

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References

Giacomazzi, Franco, Panella, Carlo, Pernici, Barbara, & Sansoni, Marco (1997). Information systems integration in mergers and acquisitions: A normative model. *Information & Management*, 32(6), 289-302.

Habeck. M.M., Kroger, F., & Tram, M.R. (2000). *After The Merger: Seven Rules for Successful Post-Merger Integration.* London: Pearson Education Limited.

Jang, Se-Jin (2010). *Strategic Management* (5th ed.). Seoul, Korea: Pak Young Sa.

Johnston, Kim D., & Yetton, Philip W. (1996). Integration information technology division in a bank merger: Fit, compatibility and model of change. *The Journal of Strategic Information Systems*, 5(3), 189-211.

Kim, Hyo-Keun, Choi, Yoon-Ju, & Chung, Sung-Hee (2001).An Exploratory Study on the Factors Influencing Informations Systems Integration Performance in Mergers and Acquisitions. *Information Systems Review*, 3(2), 387-398.

Lajoux, A. R. (1997). *The Art of M&A Integration: A Guide to Merging Resources and Processes, and Responsibilities.* New York : McGraw Hill.

Lee, Chang-Jin, & Lee, Jung-Hoon (2009). An Integrated Model on the Determinants of Successful Post-M&A Information Systems Integration: A Comparative Case Study of Two Financial Firms in Korea. *Information Systems Review*, 11(2), 45-66.

Lee, Sun-Rho (2000). A Study of Inter-organizational Information Systems Integration Strategies under M&A Environments. *Information Systems Review*, 2(2), 313-323.

Shimizu, Katsuhiko, Hitt, Michael A, Vaidyanath, Deepa, & Vincenzo, Pisano (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management*, 10(3), 307-353.

Stylianou, Antonis C., Jeffries, Carol J., & Robbins, Stephanie S. (1996). Corperate mergers and the problems of IS integration. *Information & Management*, 31(4), 203-213.

Weber, Yaakov, & Pliskin, Nava (1996). The effects of information systems integration and organizational culture on firm's effectiveness. *Information & Management*, 30(2), 81-90.