A Multiple Case Study on Post-Merger IT Integration with IT Culture Conflict Perspective

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Abstract

This paper analyzes the culture conflicts of merged IT departments in two banks in Taiwan. The integration of divergent cultures is crucial to maintain the performance of a merged organization. We examine issues in post-merger IT integration of two Taiwan’s financial holding companies, and then argue that the understanding of IT culture conflicts between two merged departments can contribute to the effectiveness of post-merger IT integration. This paper identified three types of IT cultural conflict occurred in IT integration, examined the major effects on IT conflicts and discussed how to resolve IT culture conflicts in post-merger IT integration. We assert that an IT department can resume the productivity once IT culture conflicts can be identified and resolved even if IT infrastructures and processes of merged organizations are incompatible.

1. Introduction

A merger defines the combination of two (or more) companies into a single company, which includes acquisitions or any other forms of merger [18]. The growing competition in the business environment drives companies to conduct various mergers to expand their business, such as horizontal, vertical or conglomerate merger. Through these mergers, companies expect to gain financial, operational and managerial synergies [22]. However, this merger has also come with many challenges; for example, post-merger integration problems are common to most mergers [23]. For IT-intensive firms, IT integration is a crucial factor for successful mergers [11], and faulty integration is a significant cause of merger failure [22]. The MFG (Mizuho Financial Group) project is a frequently cited example of IT integration failure in Japan [10] due to its poorly managed integration effort and lack of cultural integration.

The integration of divergent cultures is a crucial factor for the merger success [4]. Prior studies on IT culture in organizations are mainly on corporate culture [11, 25] or disagree on IT’s role [14]. Recently, a survey shows that “cultural integration” is an important impediment to successful IT integration, and suggests that learning how to plan and execute IT cultural integration in post-merger is getting important [6]. IT Integration usually confronts complex issues, such as the decision on how to merge IT components including infrastructure, processes, applications, people (skills) and culture [11]. Although high-level integration [5] enhances merger synergy, it may increase coordination cost and potential conflicts [24].

This study is aimed to investigate how IT culture conflicts affects post-merger IT integration, including the types of IT cultural conflict occurred in post-merger IT integration, and their corresponding resolutions. Leidner and Kayworth [15] proposed a tripartite view of IT culture conflict emerging in the context of IT development, adoption and management. Based on these perspectives, this study investigates how social groups perceive and ultimately respond to IT-based change in post-merger IT integration. Due to the limited understanding on the post-merger IT culture conflict in the banking industry, this study adopts in-depth explorative case study [27], and expects to increase the understanding of the factors influencing the process of post-merger IT integration.

This paper is organized as follows. Section 2 reviews literature related to IT integration. Section 3 describes research methodology. Section 4 analyzes IT culture conflicts in the case study, and Section 5 explores how these case companies resolve conflicts in IT integration process. Section 6 discusses the findings from these cases and Section 7 concludes this study.

2. Literature review
2.1. Merger ambition and IT integration strategies

Merger strategy determines the degree of merger integration [8]. McKiernan and Merali [19] identified three merger objectives: absorption, symbiosis, and preservation. Absorption is that the merged company is integrated into the bidder company to form one new entity in order to increase market share. This strategy requires the complete integration of business processes, IT, organizational structure and culture. Symbiosis is aimed to combine only the strengths of both parties in order to enhance the resulting company’s market power; and thus only partial integration takes place. Preservation allows two parties to remain autonomous in order to allow them to develop their capabilities.

An IT integration strategy consists of IT integration objectives and methods. IT integration usually specifies three objectives: complete integration, partial integration, and co-existence [26]. Complete integration is the most ambitious objective in IT integration that two independent IT departments are merged. Partial integration establishes priorities to integrate the most important processes and systems, and moves the remainders to a later stage. Co-existence tries to keep the two IT departments of the merger partners unchanged, and only realizes bridges for data exchange and consolidation if necessary. IT integration can be realized by four methods: renewal, takeover, standardization, and synchronization. Renewal abolishes all IT of both merger partners and replaces it by a completely new IT; therefore, this method can only be used in an absorption situation. Takeover closes down all of IT of one of the partners, and uses the IT of the other as the IT for both. Standardization combines the best parts of both ITs as the new standard for the new organization. Synchronization keeps everything as it was, and has the advantage of continuity with little cost required for retraining people in the new system.

<table>
<thead>
<tr>
<th>Merger objectives</th>
<th>IT integration objectives</th>
<th>IT integration methods</th>
<th>Synergy benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>Complete IT integration</td>
<td>Renewal</td>
<td>Increase market share</td>
</tr>
<tr>
<td>Symbiosis</td>
<td>Partial IT integration</td>
<td>Standardization</td>
<td>Enhance market power</td>
</tr>
<tr>
<td>Preservation</td>
<td>IT co-existence</td>
<td>Synchronization</td>
<td>Future development</td>
</tr>
</tbody>
</table>

Renewal and takeover have higher integration ambition than partial integration, and standardization has greater ambition than synchronization. For enhancing the synergy of merger, it is necessary to understand the features of each option in order to select the most appropriate IT integration strategy as Table 1 indicates; however, we may not implement the best process in facing incompatible IT configuration [13] or culture conflicts [10].

2.2. Strategic alignment model

The Henderson and Venkatraman’s strategic alignment model provides four perspectives in dealing IT alignment issues. They are strategy execution, technology transformation, competitive potential, and service level perspectives [12]. Luftman and the coauthors [17] extended the strategy alignment model by classifying four areas into three domains. The anchor quadrant is of the greatest strength and drives the change. The pivot quadrant is the weakest, and it is where changes will be addressed. The impacted domain will be directly affected by the change to the pivot domain. For example, post-IT integration is always treated as a technology transformation process [26], the anchor quadrant is the business strategy, the pivot quadrant is IT strategy, and the infrastructure and process fields are the impacted domain [3]. In other words, for supporting business strategy, IT department must develop the proper IT integration strategy and redesign the IT infrastructure and process, in which at least three components, IT architecture, IT process, and IT skill are addressed [12].

IT architecture selection is to redesign the technical infrastructure, such as core applications, the configuration of hardware, software, communication, and the data architecture. IT process selection is to redesign the work processes central to the operations of the IT infrastructure, such as system development, maintenance, and monitoring. IT skill selection is to redesign the acquisition, training, and development of the capabilities of the individuals which are required to effectively manage and operate the IT infrastructure after the merger.

Prior research [2] has argued that the alignment of a firm’s IT strategy with its business strategy can improve organizational performance. The success of IT integration depends on the degree of alignment between the merged business and the merged IT function [18]. However, achieving business-IT strategic alignment has been a constant challenge for many organizations [16], especially when two firms try to merge into one.

2.3. IT culture conflict
Leidner and Kayworth [15] proposed a value-based approach to develop the themes to connect the relations between IT and culture. Given that culture is by definition shared value, IT culture is the value attributed to IT by a group. They [15] also identified three types of values: the group member values, the values embedded in a specific IT, and the general IT values. *Group member values* represent the values held by a group’s members that signify the espoused beliefs about what is important to the particular group. *Values embedded in a specific IT* refer to values assumed in the working behaviors that IT is designed to enable. *General IT values* refer to those values that a group ascribes in general to IT.

Based on the value-based approach, Figure 1 shows the three forms of IT cultural conflict which may emerge in the context of IT development, adoption and management, and may exist at the national, organizational, and subunit levels [15]. *System conflict* describes the conflict that emerges when the values implicit in a specific IT contradict the values held by the group members who are using, or expect to use the system. For example, a knowledge management system is designed to foster the communities in an organization that cherishes individual billable hours. *Contribution conflict* is defined as the contradiction between group member values and the group’s IT values. For example, the relevant user group (physicians) may view IT as cost control whereas they espouse to cherish first and foremost quality of care. *Vision conflict* is the contradiction between the value embedded in a system and a group’s IT values. For example, IT is designed to promote efficiency for a group that perceives IT as a time-consuming burden.

3. Methodology

3.1. Analytical framework

Based on strategic alignment model [12], Figure 2 shows the four fields of business and IT interaction in business strategy, IT strategy, organizational infrastructure and processes, and IT infrastructure and processes. In general, post-merger IT integration is treated as a technology transformation process driven by business strategy. The infrastructure and processes field is always the impacted domain [17]. To support business strategy, IT architecture, processes and skills should be effectively redesigned [12] and conflicts may occur. For example, in order to avoid the loss of expertise possessed by key IS staffs, the efficient skill integration of IS staffs is critical in the post-merger IT integration process [1]. These choices will affect the administrative structure, such as roles, responsibilities, and authority structures, and then conflicts may emerge between departments in the merged organization [9].

We examined the aforementioned issues by incorporating Leidner and Kayworth’s IT culture conflict perspective [15] into strategic alignment model, creating a framework to analyze the types of IT cultural conflict occurring in post-merger IT integration. Following the framework as shown in Figure 2, we recognized different value propositions of the merged IT organizations. Then, we identified the emerging conflicts after analyzing participants’ perspectives of both sides. Finally, we discussed the resolution for IT culture conflicts and the relationship between IT integration strategies and IT culture conflicts.

3.2. Research method
This study adopts a multiple-case design based on theoretical replication. Case studies permit rich description, through capturing multiple data sources and perspectives, which is particularly appropriate for theory building research [7]. For theoretical replication, the choice of the cases for my research is inspired by replication logic [27]. Following replication logic, cases deviate maximally and may produce contrasting results, but not for predictable reasons [27, p.47]. This study selected two post-merger cases from A and B financial holding companies in Taiwan. They conducted IT integration while facing conflicts due to different IT cultures inherited by different organization sizes, IT integration strategies, and characteristics of government-owned versus private banks.

The principal method of data collection is through in-depth interviews with key participants, such as directors, managers, and engineers. The interviews were tailored to each particular person and focused on their perceptions of what happened and why; on how decisions and actions were influenced and conflicts resolved. The triangulation approach through various data sources and collection methods is particularly beneficial in theory generation [20]. Bank planning documents regarding the integration project were also examined, as well as annual reports of the two banks and media coverage of the acquisition. These interviews and supporting documents formed the basis for the case description and analysis.

The research adopts content analysis [21] to examine conflicts caused by the disagreement over the problem of redesigning IT infrastructure, processes and skills. The analysis of the data collected from the various sources reflected the analytical framework as presented earlier. Yin [27] presented two strategies for the general use of case study. This study adopts case description to explore the post-merger IT culture conflict due to the limited understanding on these phenomena in the banking industry.

4. Case description and analysis

4.1. Case 1 study

4.1.1. Case 1 background In order to enhance business competitiveness, in December 2002, a financial holding company, denoted as A, acquired the assets of Bank A2, a government-owned bank, and used Bank A1 as the identity. Bank A2 is well versed in the corporate finance and risk management businesses, and Bank A1 is strong in consumer banking. However, in order to preserve the brand position and the strengths of both parties, as well as minimizing potential repercussions, company A then decided to merge these two banks through actively integrating information systems, workflows, organizations and staffs.

Although both banks were complementary to each other, there were several significant differences in both sides. Bank A1 was more business-driven, tended to use flexible technology and process to satisfy the demands of the business units; however, IT department of Bank A2 was quite separated from the business and more technology-focused. The contrasting culture of IT practices caused conflicts during IT integration.

4.1.2. IT culture conflicts of Bank A According to Leidner and Kayworth’s IT culture conflict perspective, there are three conflict types of IT integration between both banks as shown in Table 2.

(1) System conflict occurring in IT platform integration

As defined above, system conflict occurs when the values assumed in a specific IT contradicted the values held by the group members. First of all, different group member values in IT platform’s selection existed within these two banks. For cost consideration, “the core banking system needs an inexpensive platform.” Explained by a manager in Bank A1 which operated AS/400 based systems. Bank A1 as a government owned bank was committed to an IBM mainframe platform for system reliability regardless of cost. A manager in Bank A2 mentioned that “The stability and ability are essential to a core banking system.” Similarly, these two banks existed some differences in treating values embedded in an IT platform. Bank A1 appraised AS/400 based system for its user friendly and easy-to-maintain, while Bank A2 used IBM mainframe by emphasizing its reliability at the expense of complexity. In summary, in considering cost and ease of use, Bank A1 is contrary to Bank A2’s reckless cost and hard to manage, and system conflict occurred in the selection of IT platform after emerging. The CIO of Bank A1 recalled that, “IBM mainframe is expensive and difficult to use. Due to poor housekeeping, it often had CPU bound which never came up in AS/400 before merger.”

(2) Vision conflict occurring in internet banking integration

Vision conflict describes the contradiction between values embedded in a specific technology and a group’s IT values. First of all, these two banks existed some differences in treating values embedded in IT process design. For supporting external customers’ needs, Bank A1 “adapted simple and flexible process to discover the potential customers,” while Bank A2 “used formal and control process” to meet internal customers’ needs. Similarly, the group’s IT values were very different from each other in IT process integration. The IT department of Bank A1 was
business-driven, “with service perspective of doing business, the products must be out of sale on account of bad function”; however, the IT department of Bank A1 was traditionally more technology-focused, “with government finance perspective, nothing will be closed because of poor function.” In summary, Bank A1’s flexible process and business-driven design are contrary to Bank A2’s formal process and technology-focused design. There existed vision conflict in IT process integration of internet banking business. The CIO of Bank A1 mentioned that, “After pre-test, I told them that our customers can’t accept this process of internet banking. It took us about three months to tune the system because they (IT staffs from Bank A2) did not agree with my opinions in the beginning.”

Table 2. IT culture conflicts of IT integration between Banks A1 and A2

<table>
<thead>
<tr>
<th>IT integration</th>
<th>Bank A1</th>
<th>Bank A2</th>
<th>Conflict type</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT platform integration</td>
<td>GV: Cost saving</td>
<td>GV: Reliability</td>
<td>System conflict (High)</td>
</tr>
<tr>
<td>VEI: Easy to use</td>
<td>VEI: Hard to maintain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet banking integration</td>
<td>VEI: Flexible</td>
<td>VEI: Formal</td>
<td>Vision conflict (High)</td>
</tr>
<tr>
<td>IV: Business-focused</td>
<td>IV: IT-focused</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT skills integration</td>
<td>GV: Creative</td>
<td>GV: Follow rule</td>
<td>Contribution conflict (High)</td>
</tr>
<tr>
<td>IV: General skills</td>
<td>IV: Professional skills</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note that IV denotes IT values, GV denotes group member values, and VEI denotes value embedded in a specific IT.

(3) Contribution conflict occurring in IT skills integration

Contribution conflict occurred when the group members’ values conflicted with the group’s IT values. Firstly, different group members’ values existed within these two banks in the selection of IT skills. IT employees of Bank A1 are more creative to accomplish the systems for better serving customers; for example, “they try to take advantage of new technology such as using web service to create ‘e-channel’ as information exchange between different systems,” while the IT staffs of Bank A2 “tend to follow rules, work hard and execute well and they are good at using dedicated technology to maintain the legacy system.” Similarly, the group’s IT values were very different from each other in IT skill integration. Since the IT department of Bank A1 adapted to new technology, “IT personnel will work independently soon;” however, the IT department of Bank A2 used dedicated technologies to the system development, “IT staffs must accept a series of training before the formal operations,” which made the acquisition of new technology and personnel more difficult. In summary, more creative staffs and new technology of Bank A1 were contrary to conservative employees and dedicated technology in Bank A2. There existed contribution conflict during the integration of IT skills. The CIO of Bank A2 commented that “For providing better response time, the core banking systems need professional skills of IBM mainframe, and we cheer these senior technical staffs who are dedicated in those jobs like DBA.”

4.2. Case 2 study

4.2.1. Case 2 background For enlarging the business scale and increasing the market share, in December 2002, a financial holding company, denoted as B, acquired the assets of Bank B1, a commercial bank, and combined the banking information platform of both banks. The merged bank uses Bank B as the identity. Bank B1 has been strong in the field of international banking, while Bank B2 is a good investment bank. However, in order to improve overall operating performance, after four years of intensive preparation, the financial holding company B then decided to merge these two banks through actively integration of information systems.

Before the merger, both banks were once government-owned banks, but they had some differences in IT architecture, business processes, skills and cultures between both sides. IT department of Bank B1 is more business-driven, oriented to satisfy the demands of the external business units; however, IT department of Bank B2 was traditionally separated from the business and more technology-focused but creative.

The different culture of IT practices caused distinct opinions in IT post-merger.

4.2.2. IT culture conflicts of Banks B1 and B2 In viewing IT culture conflict perspective, there were three conflict types between Bank B1’s mainframe team and Bank B2’s Unisys team as shown in Table 3.

(1) System conflict occurring in IT platform integration

Like case 1, system conflict occurs in the IT platform integration of mainframe and Unisys group in this case. Bank B2 was more cost sensitive, so that it adopted Unisys based systems, while Bank B1 concerned system reliability which led it to adopt IBM mainframe systems. A system team leader of Bank B2 recalled that, “It’s clear that Unisys system is more user-friendly than IBM mainframe and needs more management cost.” Fortunately, in order to reduce the impact of platform integration, Bank B1 also provided RS/6000 which is compatible with Unisys system.

(2) Vision conflict existed in the banking system integration

The core banking system integration needs the consolidation of internal and external services. Basically, values embedded in internal process were
very different from each other. The hierarchical and formal IT processes management in the IT organization of Bank B1 was to support internal customers; in contrast, the IT management of Bank B2 was more flexible. The CIO of Bank B2 supports this observation, saying, “Since Bank B1 had more strict business processes, we made a lot of time for communication in internal process adjustment, for example, to construct the virtual printing system for saving one million dollars every month.” Similarly, the group’s IT values were very different from each other in banking system integration. IT department of Bank B1 focused on external customers, while that of Bank B2 focused on internal customers. The CIO of Bank B2 mentioned that, “Bank B1 acquired new technologies such as e-channel, e-service to support external customer. These are nothing new to us, but we have constructed the virtual printing system for internal use.” Since the contradiction between values embedded in a system and a group’s IT values, vision conflict occurs in internal process integration for banking systems.

Table 3. IT culture conflicts in IT integration between Banks B1 and B2

<table>
<thead>
<tr>
<th>IT integration</th>
<th>Bank B1</th>
<th>Bank B2</th>
<th>Conflict type</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT platform integration</td>
<td>GV: Cost saving</td>
<td>GV: Reliability</td>
<td>System conflict</td>
</tr>
<tr>
<td></td>
<td>VEI: Easy to use</td>
<td>VEI: Hard to maintain</td>
<td>(Medium)</td>
</tr>
<tr>
<td>Banking system integration</td>
<td>VEI: Formal (Internal)</td>
<td>VEI: Flexible (Internal)</td>
<td>Vision conflict</td>
</tr>
<tr>
<td></td>
<td>IV: External customers</td>
<td>IV: Internal customers</td>
<td>(Medium)</td>
</tr>
<tr>
<td>Operator integration</td>
<td>GV: Creative (IV: Professional skills)</td>
<td>GV: Conservative (IV: General skills)</td>
<td>Contribution conflict</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Medium)</td>
</tr>
</tbody>
</table>

*Note that IV denotes IT values, GV denotes group member values, and VEI denotes value embedded in a specific IT.

(3) Contribution conflict occurring in operator integration

Firstly, different group members’ values existed within these two banks in the selection of IT skills. Although IT employees of Bank B1 are more creative in external services, they are lack of ingenuity in internal management. A system team leader of Bank B2 recalled that, “We constructed process automation and virtual printing system for reducing operating cost but there were not found in Bank B1.” In addition, IT department of Bank B2 chose dedicated technologies platform, which makes the acquisitions of technology personnel more difficult. The CIO of Bank B2 commented that, “How terrible is the operator training that they consumed six months for freshmen. In the same fashion, we needed only two weeks in Bank B2.”

In summary, more conservative employees and dedicated technology of Bank B1’s mainframe team were contrary to creative staffs and open technology in Bank B2’s Unisys team. There existed contribution conflict during the operator skills integration.

4.3. Theoretical findings of case analysis

In comparing with the value proposition shown in sections 4.1.2 and 4.2.2, we distilled main theoretical findings of these analysis cases to discover the types of IT cultural conflict occurred in post-merger IT integration. The findings are listed as follows:

Firstly, as shown in Tables 2 and 3, financial holding companies A and B had system conflict in IT architecture integration, but Bank A had more significant system conflict than that of Bank B. Since Bank B had more similar organizational culture (Banks B1 and B2 were also government-owned banks before 1970), in addition, they provided more compatible IT resources (companies B1 and B2 retained AS/400 for each other and provided RS/6000 which is compatible with Unisys). We thus propose the proposition, P1: The greater the compatibility of adopted IT platforms, the lower the system conflict occurs in IT architecture integration.

Secondly, Bank B had lighter vision conflict than Bank A in core banking system integration. In comparison with Bank A, company B provided bountiful resources (IBM mainframe, AS/400 and RS/6000), in addition, the IT staffs of Banks B1 and B2 were also business-driven and creative; therefore, they adopted a flexible process to meet the requirements of internal and external customers simultaneously after merger. Thus, we propose the proposition, P2: The lower the different business foci, the lower the vision conflict occurs in IT process integration.

Thirdly, we also found that banks A and B had contribution conflict in IT skill integration. In comparing with the value proposition shown in section 4.1.2 and 4.2.2, Bank A had more significant contribution conflict than Bank B. Except for the more similar organizational culture of Banks B1 and B2, Bank B adopted a more loose IT platform integration method, which make a good chance to share IT skills knowledge between RS/6000 (Bank B1) and Unisys’ (Bank B2) team members. Thus, the proposition can be formulated as follows, P3: The greater the difference of IT domain knowledge, the greater the contribution conflict occurs in IT skill integration.

5. Approaches to merger

5.1. Case 1 merger: Banks A1 and A2
5.1.1. Merger ambition and IT integration strategies

For supporting the ambition of the merger: “one bank, one process, and one system,” company A then decided to merge two banks through IT resource restructuring. IT department of Bank A adopts a full-integration strategy for IT integration planning and implementation. First of all, they set up the organization, called PMO (Project Management Office) in charge of integrating both sides. At the same time, “the two banks proposed what kinds of their systems and the most cost-effective and expedient way to combine them.” For some stalemate of each other, the PMO requested the help of consultants and made the final decision. The IT platform replaced Bank A’s mainframe (i.e., takeover), and the core banking application systems also used Bank A’s systems, which were revised to support the two banks’ processes (i.e., standardization).

5.1.2. Process of IT integration

In the beginning, Bank A detected that there were different cultures and IT configuration in the both sides. To achieve the full integration goal, they made cultural integration before system integration, and then turned IT department into the service-oriented organization. The integration process is shown as follows.

1) Change IT group members’ mindsets through training

Since Bank A adopted the IBM mainframe platform and core banking applications of Bank A2, IT staffs of Bank A1 “were in great agitation because their system will be stopped after merging and they have to learn the new IT platform and skills.” The Chief of Bank A1, bewared that it is a tough job, held a series of team-moving trainings. These courses encouraged IT staff to recognize the changes caused by the merger, and to change their mindsets. The CIO of Bank A1 recalled, “You sew the clothes for a bride. Although you may not be the bride, you may become a tailor as your second career. To record the process means you are one of them and not be missed. Once understand the whole process, you seem to be a consultant with design new processes for merger.” After that, the original IT staffs of Bank A1 would be responsible for process integration, and the original staffs of Bank A2 took charge of the system integration.

2) Turn to customer-oriented service by management-by-objective strategy

In the past, IT staffs of Bank A2 were more technology-focused, and information systems were limited to support internal customers. Bank A adopted management-by-objective strategy to deliver customer-oriented services. IT staffs of Bank A1 were responsible for service design, while these of Bank A2 took charge of system implementation. The CIO of Bank A1 mentioned that, “The goal of merging was not only to reduce cost, but also to provide better services. If there is a goal—‘double profit after three years’, IT departments will adopt service perspective to design the system. IT staff will bring in the innovative ideas for looking new customers.”

After the integration process, the concepts of two sides come close to each other “After the merger, we cannot say which process is good or bad, a lot of things had been destroyed to fit our environment. Therefore, many concepts have to be changed.” In January 2005, both banks were officially merged into Bank A and became the first successful full-scale merger of operations between a large government-owned bank and a private bank in Taiwan.

5.2. Case 2 merger: Banks B1 and B2

5.2.1. Merger ambition and IT integration strategies

In order to achieve the ambition of merger: “cost down of IT department operation,” according to McKinsey’s suggestion. Because the business scope of Bank B1 is three times larger than Bank B2, IT department of Bank B proposes a full-integrated strategy for IT integration. Bank B1’s Unisys was replaced by Bank B1’s mainframe, retained AS/400 on both sides and provided RS/6000 which is compatible with Unisys (i.e., standardization), in addition, the core banking application systems also used Bank B1’s systems, which were renewed to support these two banks’ processes (i.e., takeover and renewal).

5.2.2. Process of IT integration

At first, Bank B detected that there are different organizational cultures in both sides. To achieve the full integration goal, they adopt standardization method in IT platform integration, and provide outsourcing strategy to reduce the conflicts. The integration process is shown as follows.

1) Provide bountiful IT resources for system integration by the outsourcing strategy

Since Bank B decided to use Bank B1’s mainframe system instead of Unisys system, the IT staffs of Bank B2 were responsible for data migration to the mainframe system. Fortunately, Bank B acquired a series of IT resources in IT integration process. The CIO of Bank B recalled, “Apart from IBM mainframe, we retained RS/6000 system which is compatible with Bank B1’s Unisys system and provided outsourcing resources for data conversion and new function design.” These situations encouraged IT staffs to migrate IT experiences of Unisys to RS/6000 and renewed the values of IT outsourcing. The CIO of Bank B2 commented that “Due to the successful
outsourcing strategy, pre-testing and on-line support, we feel comfortable in IT integration process.”

(2) Refine IT process services through business process reengineering

Before merging, IT staffs of both banks were more business-focused. Bank B2 provided more flexible process mechanism for internal customers and Bank B1 adopted more creative processes to external customers. Bank B proposed business process reengineering strategy to improve global customer services. IT staffs of Bank B2 were responsible for internal service design, while those of Bank B1 took charge of external service implementation. The CIO of Bank B illustrated his strategic vision “To increase profits, we constructed the process rationalization team and adopted flexible IT technologies to refine IT processes, such as virtual printing system of Bank B2 and reinforced Bank B1’s e-service for external customers.”

After the integration, the consensus of two sides increased gradually. “The IT integration processes were very smooth. Although some small incidents occurred, we think we grew from this process and users are familiar with the new systems.” The integrated system had been finished on August 2006 and the Bank B became the third largest banking service in Taiwan.

5.3. Theoretical findings of case comparisons

Through cross-case comparisons, we identify the relationship between IT integration strategies and IT culture conflicts and resolution approaches used in IT integration. These findings are listed as follows:

Firstly, Bank A had more significant conflicts than Bank B, because it adopted standardization method in application integration and used the takeover method in different IT platform integration. Takeover method means that one of the IT partners will close down and the standardization method must combine the best practices of the two previous of IT [26]. In comparison with Bank B, without any alternative solution like Bank B, Bank A replaced Bank A1’s AS/400 which Bank A1 had used for a long time. In addition, Bank A2 must revise the core banking application to support these two banks’ processes. In this scenario, conflicts between Banks A1 and A2 easily arose. Thus, we conclude proposition P1: More IT conflicts occur when the merged organizations adopt the standardization method in application integration and use the takeover method in different IT platform integration.

Secondly, according to the prior analysis of IT integration process, we conclude the following three propositions to explain the phenomena observed.

(1) Owing to the strict integration method and IT resource limitation, the IT staffs of Bank A1 had no alternatives in IT platform’s selection and the IT staffs of Bank A2 must revise the core banking system to support these two banks’ processes. In this scenario, serious conflicts had arisen, and Bank A encouraged IT staff to recognize the changes through training. From the case analysis of Bank A, the team-moving courses not only changed their group values mindsets, but also reduced the system conflict of IT platform integration and the contribution conflict of IT skill integration. Thus, we conclude proposition P2: Changing IT group members’ mindsets through training reduces the system and contribution conflicts in post-merger IT integration.

(2) In the past, IT staffs of Bank A2 were more technology-focused, and limited to support internal customers. Bank A adopted successful management-by-objective strategy to deliver customer-oriented services, renewed the IT values and arranged the roles IT staffs of both banks. In the other case, although IT staffs of Banks B1 and B2 were business-focused, Bank B2 provided more flexible system supports for internal customers, while Bank B1 adopted more creative processes to external customers. To enhance global customer services, Bank B adopted a business process reengineering strategy to compromise with them, and improved business profits through IT value renewal. According to these two case studies that Banks A and B promoted IT values by management-by-objectives and business process reengineering respectively will not only help reduce the vision conflict of IT process integration and the contribution conflict of IT skill integration. Therefore, we summarize this finding into proposition P5: Promoting IT values reduces vision and contribution conflicts in post-merger IT integration.

(3) In the beginning of IT full-integration, IT staffs of Bank B2 worried about that they might learn the mainframe skill after Unisys system was removed. In addition, IT staffs of Bank B1 needed to renew the dedicated system of Bank B2, after Bank B retained AS/400, provided RS/600 and acquired IT resources for data conversion and new function design. These situations encouraged IT staffs to migrate IT skill experiences form Unisys to RS/6000 and renewed the values of IT integration resources. From case 2 analysis, the outsourcing strategy not only changed the values embedded in a specific IT, but also reduced the system and vision conflicts in IT architecture and IT skill integration. Thus, we conclude proposition P7: Change values embedded in a specific IT through providing bountiful IT resources reduced system and vision conflicts in post-merger IT integration.

6. Implications for IT integration

6.1. IT integration and IT culture conflicts
Group member values represent a manifestation of culture [15]. According to the case analysis in section 4 that Banks $A_2$ and $B_1$ had similar organizational culture, they had same group value proposition in IT integration. But they had different IT values in IT skill integration and values embedded in a specific IT in IT process integration due to adopting different IT platform. In comparing with Bank $A_2$, the IT group of Bank $B_1$ were easier in IT skill selection and adopted flexible process to support external customers. Therefore, we propose proposition $P_8$: The characteristics of IT platform affect IT values in IT skill integration and values embedded in a specific IT in IT process integration.

As depicted in Tables 2 and 3 that Banks $A_2$ and $B_1$ adopted the same platform, they had more similar proposition in values embedded in a specific IT in IT platform integration. But they had different IT values in process integration and group member values in skill integration due to different organizational cultures (Banks $B_1$ became a commercial bank since 1970). In comparing with Bank $A_2$, the commercial Bank $B_1$ was more business-focused and acquired innovative technologies such as e-channel, e-service to support new customers. We thus propose proposition $P_9$: Organizational cultures affect IT values in IT process integration and group member values in IT skill integration.

To sum up, this study found that different organizational cultures and characteristics of IT platform render to different types of IT cultural conflict. These phenomena show that when the IT department adopts a high-level integration strategy, it is necessary to consider the entire organizational cultures, the characteristics of IT platform to mitigate conflicts. In summary, we conclude proposition $P_{10}$: Different organizational cultures and characteristics of IT platform render to different types of IT cultural conflict.

6.2. Resolution of IT culture conflicts

In this study, we examined three kinds of IT cultural conflict of IT integration. After detecting these phenomena, in order to implement the best process, these two case companies adopted three main tactics (as depicted in section 5) to resolve IT culture conflicts as Table 4 indicates and described as follows:

(1) The wisdom of changing group member values. For diminishing the impact of different cultures and strict integration method, Bank $A$ changed the group values through team moving courses, which contribute to reducing the system conflict emerging in IT structure integration and the contribution conflict in the personnel skill integration.

(2) Providing bountiful IT resources. Facing different IT architectures, Bank $B$ proposed the IT outsourcing strategy, which changed the values embedded in a specific IT and reduced the system and vision conflicts in IT architecture and IT skill integration.

(3) Promoting shared IT values. Bank $A$ reduced the vision conflict occurring in internet banking integration and the contribution conflict in personnel’s IT skill integration. Bank $B$ also took this strategy to refine global IT process services. These findings are in line with previous studies [15].

| Table 4. IT culture conflict and resolution strategy |

<table>
<thead>
<tr>
<th></th>
<th>Bank $A_1$ and $A_2$</th>
<th>Bank $B_1$ and $B_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration strategy</td>
<td>Strict</td>
<td>Loose</td>
</tr>
<tr>
<td>IT culture conflict</td>
<td>High</td>
<td>Median</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>High differences</td>
<td>Median differences</td>
</tr>
<tr>
<td>Characteristics of IT platform</td>
<td>High Differences</td>
<td></td>
</tr>
<tr>
<td>Resolution strategy</td>
<td>Change group member values</td>
<td>Provide bountiful IT resources</td>
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<tr>
<td></td>
<td>Promote shared IT values</td>
<td>Promote shared IT values</td>
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</tbody>
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7. Conclusions and future research

This paper has adopted a novel way of looking at the post-merger IT integration, incorporated by Leidner and Kayworth’s IT culture conflict perspective and strategic alignment model. We also conducted a multiple-case study of post-merger IT integration on two merger cases of two financial holding companies in the contrasting perspectives of IT groups. In addition, although these case studies relate to only these specific organizations, some more general implications were derived in previous sections. These inferences on topics, such as system conflict occurring in IT platform’s integration, vision conflict occurring in IT process integration, and contribution conflict occurring in IT skill integration, can become valuable themes for debating in any organizational contexts. We have also suggested that the enhancement of our understanding of the conflicts which influence successful integration and the promotion of shared IT values in a merger can thus improve our normative alignment model and guide the management.

Knowledge about IT cultural conflict can be a valuable aid to managers and other participants who take charge of making effective IT integration after merger. We have discussed two cases involving the chief executive’s leadership, such as the awareness of the differences of IT culture, the wisdom of changing group member values, prompting shared IT values and providing bountiful IT resources in IT integration. For example, our analysis treated the internet banking as
the evidence of malfunction, which seemed to conflict with the historical reverence for users of Bank A. Under such conditions, management should probably adjust formal IT policies by changing the mindsets of group members rather than preserving the dominant values. Senior managers may wish to consider the nature of IT management leadership in their own organizations and ask themselves whether the case analysis of IT culture conflict can offer useful insights with respect to their own situations.

This paper can be of value to other researchers, for example, the IT infrastructure, process and culture conflict analysis framework can be used as a basis for empirical work in other situations, where this study can provide the details of referenced methods. In addition to the basic framework and research approach, the propositions derived in this study can be tested empirically in future research.

8. References