

MANAGING RESISTANCE TO IS  
CHANGE AT THE PRE-  
IMPLEMENTATION STAGE FROM  
THE SENIOR MANAGEMENT  
PERSPECTIVE:  
A CASE OF A COMMERCIAL  
BANK IN VIETNAM

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A thesis submitted in partial fulfilment  
of the requirements of the  
London Metropolitan University  
for the degree of  
Doctorate in Business Administration

2016

## ABSTRACT

User resistance to information system (IS) change is an important issue in the IS literature. However, despite a large body of user adoption literature, there is far less literature addressing user resistance to IS change, especially in organisational contexts. Moreover, there are still left a number of open questions regarding the why and how resistance takes place. Particularly, previous research failed to explain these questions for two reasons. First, none of the previous research explained the reasons for IS resistance from a multilevel perspective. Second, previous research, with few exceptions, was empirically conducted after IS had been implemented in organisations. Hence, it can be considered to be observations made on downstream results of the upstream resistance process. The two reasons above were used as drivers for this research at the AlphaBank during the preliminary phases of its core banking system (CBS) upgrading project. The ultimate purpose of this study is to develop a framework which will be of use to practitioners for understanding and managing resistance to IS change. Given the complexity of the resistance, explanatory theories guiding the study were argued, discussed, and developed. These guiding theories were based on the open system theory, the political variant of the interaction theory, and the status quo bias theory.

The study employed an interpretivist philosophical standpoint and a collaborative practice research (CPR) was adopted. During the study, different methods were designed and conducted including informal discussions, documentation, semi-structure interviews, staff meetings and workshop. In total, twenty eight participants covering different levels of the bank's hierarchy were involved in the study. Based on the findings, it was concluded that comprehending resistance from a multilevel lens helped the AlphaBank's managers move beyond a search for a simple explanation of this phenomenon and enabled them to create more meaningful and actionable solutions. The findings contribute to knowledge in a multilevel model for understanding and managing resistance to IS change.

Key Words: Organisational change; Resistance to IS change; IS implementation; IS pre-implementation; Collaborative practice research.

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## LIST OF ABBREVIATIONS

|      |                                     |
|------|-------------------------------------|
| AR   | Action Research                     |
| CBS  | Core Banking System                 |
| CEO  | Chief Executive Officer             |
| CPR  | Collaborative Practice Research     |
| CSFs | Critical Success Factors            |
| DOI  | Diffusion of Innovations            |
| ERP  | Enterprise Resource Planning        |
| IS   | Information System                  |
| IT   | Information Technology              |
| MIS  | Management Information Systems      |
| OD   | Organisational Development          |
| TAM  | Technology Acceptance Model         |
| TOE  | Technology-Organisation-Environment |
| TPB  | Theory of Planned Behaviour         |
| TRA  | Theory of Reasoned Action           |

## LIST OF DEFINITIONS

*Core Banking System – CBS:* Core banking, in a simple term, is a highly efficient “customer accounting” and transaction processing engine for high volumes of back office transactions (Jaggy, 2013: 2).

*1-tier architecture:* This is the simplest of all the architectures, but also the least secure. Since users have direct access to the files (or the database), they could accidentally move, modify, or even worse, delete the file by accident or on purpose (Simcrest, 2013).

*2-tier architecture (CBS):* It is also called Client-Server architecture because of the two components – the client that runs the application and the server that handles the database back-end. When the client starts, it establishes a connection to the server and communicates as needed with the server (Simcrest, 2013).

*3-tier architecture (CBS):* This involves one more layer called the business logic tier, service tier or middle tier. By introducing the middle layer, the client is only handling presentation logic. It means that only little communication is needed between the client and the middle tier making the client thinner. As more users can access the system, a 3-tier solution is more scalable than its counterparts (e.g., 1-tier or 2-tier architecture) because it is allowed to add as many middle tiers (running on each own server) as needed to ensure good performance (N-tier or multiple-tier) (Simcrest, 2013).

*Basel II and Basel III:* They are the second and the third of the Basel Accords. These are comprehensive sets of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision, and risk management of the banking sector (BIS, 2014).

*Pre-implementation:* Once the organisation has considered the need to change its current technology and identified technology options, the result is called an *adoption*. The adoption point marks the beginning of the *pre-implementation phase*. This phase

usually involves activities such as planning for the technology introduction, deciding on the role of the vendor and in-house resources in managing the introduction (Herold et al., 1995).

*Post-implementation:* The new technology has been installed or implemented and it is being used within the organisation (Herold et al., 1995).

## ACKNOWLEDGEMENTS

*Millions of people I have known in my life since the day I was born. While majority of them just passed by my life without any impression, few of them have remained as family, relatives, and friends. These precious people not only supported me, but also inspired me to finish this thesis.*

*First of all, I would like to express my deep gratitude to my parents who bore me, raised me, supported me, taught me, and loved me.*

*I also would like to extend my sincerely thanks to all of my supervisors: Dr. Chahid Fourali, Dr. Robert Carty, Dr. Wendy Bloisi, and Dr. Humphrey Shaw. They are the ones who always pushed me to the limit, held me to their high standards, and imparted me their wisdom about the ways of the academic world. To them, I will always remain grateful.*

*I owe my special thanks to every staff at the AlphaBank who had kindly spent time on my research and supported me during this study. I also want to thank my critical friends for their endless discussions on my study.*

*And finally, I greatly thank my wife for all her emotional supports which helped me get through the difficult times. From the bottom of my heart, I really appreciate her love that made it all worthwhile.*

## DECLARATIONS

I declare the followings:

(1) that the material contained in this thesis is the end result of my own work and that due acknowledgement has been given in the bibliography and references to **ALL** sources be they printed, electronic or personal.

(2) the Word Count of this thesis is **81, 241** words

SIGNED: ..... DATE: .....

# CHAPTER 1: INTRODUCTION

## 1.1. Research rationale

### 1.1.1. Reasons for studying resistance to IS change

Knowledge creation, both tacit and explicit, has become a key element in business administration. With recent advances in Information System (IS), organisations are allowed to obtain, process, store, and exchange information easily. Furthermore, IS can support transformation within and between tacit and explicit knowledge.

Nevertheless, most of the implementation of IS projects is not trouble free (Benjamin, 2005; Scott and Vessey, 2002) and up to seventy five per cent of IS initiatives are ultimately considered failures (Dekkers and McQuaid, 2002; Hong and Kim, 2002). The frequent reasons for failures are largely attributed to people issues rather than technical errors (Dwivedi et al., 2012) and employee resistance to change has consistently been identified as the number one reason (e.g., Joshi, 2005; Kim and Kankanhalli, 2009). The effects of employee resistance may include delays in the project duration, budget overruns, and underutilisation of the new system (Beaudry and Pinsonneault, 2005).

Despite the importance of understanding and managing employee resistance for the success of an IS implementation, Laumer (2011) argued that most previous research in the IS context focused more on investigating key factors contributing to IS adoption rather than on factors causing resistance. For instance, Williams et al. (2009) found that IS research, over the past 20 years, has mainly focused on individual IS adoption, acceptance (or post-adoption), and diffusion decisions; and that 345 articles have been published in the major journals of the discipline (e.g., *Management Information Systems Quarterly*, *Information and Management*, *Information System Journal*, *Communications of the Association for Information Systems*). However, the phenomenon of IS resistance has drawn much less attention so far (e.g., Dwivedi et al., 2012; Rivard and Lapointe, 2012). In other words, as

Laumer (2011) argued, related research areas have come across resistance phenomenon as well but have also ignored the possibly vital difference between a lack of arguments for IS adoption and IS resistance of a new IS. For instance, in a broad sense, Joshi (1991) defined both adoption and resistance of a system as the user's behaviours resulting from "the perceived benefits or losses that the implementation of a system brings about for the user" (p. 231). Similarly, while Tscherning (2011: 418) defined adoption as "an individual's attributes and beliefs lead to an intention to adopt an IT", Kim and Kankanhalli (2009: 568) conceptualised resistance as "an adverse reaction...or the opposition of users to perceived change related to a new IS implementation". Therefore, resistance has been often considered by previous researchers as the reverse side of the adoption coin (Laumer, 2011).

Although it can be seen that investigating key factors contributing to IS adoption (e.g., perceived ease of use and perceived usefulness of the new system) instead of focusing on factors causing resistance can serve the same purpose as to help managers enhance their employees' adoption of a new IS, the question now is: "Why are seemingly useful technologies sometimes resisted by potential adopters?" (Bhattacharjee and Hikmet, 2007: 725). In this case, the existence of the factors causing resistance or the "inhibitors" may explain why people fail to adopt (Cenfetelli, 2004: 473). From this point of view, he added that factors causing resistance deserve an independent investigation on the basis of three key arguments. First, there exist users' perceptions that serve solely to discourage usage (e.g., implementation risks), and these are qualitatively different from the opposite of the perceptions that encourage usage. Second, the inhibiting and enabling perceptions are independent of one another and can coexist. Finally, the inhibiting and enabling perceptions have different antecedents and consequent effects. As unique beliefs, the inhibiting perceptions can add to our understanding of the antecedents of usage or outright rejection. Given preceding discussions, if resistance cannot be conceptualised simply as the opposite of adoption, Dwivedi et al. (2012) strongly believed that studying adoption alone will do little to provide insights into user resistance.

### **1.1.2. Existing research and gaps in knowledge**

When reviewing the relevant literature, I realised that despite a large body of IS adoption literature, the phenomenon of resistance to IS change which is another side of the same coin is under researched. In my extensive review of IS-related journals from 2002 to present (see Chapter 2), I only identified six of thirty five relevant articles which explicitly defined the concept of resistance in the IS context and only nine opened the black box of why and how resistance takes place. Although previous research has somewhat explored the reasons for IS resistance, it must be noted that there are still significant research gaps which require future attention. Particularly, most of the studies did not examine resistance at multiple levels including the individual, group, and organisational level of analysis (Erwin and Garman, 2010). The only exception is the study conducted by Lapointe and Rivard (2005) in which they allowed for two levels of analysis of resistance to IS change (i.e., individuals and groups/units) and argued that the nature of resistance is actually at multiple levels. Yet, whereas resistance to IS change probably exists at the individual and group level, previous IS researchers have long argued that a critical determinant of an IS implementation success within an organisation is also depended on the match or fit between the proposed system and the organisational elements (e.g., organisational structure, rewards system, leadership) (e.g., Dwivedi et al., 2012; Hong and Kim, 2002). Therefore, it is questionable whether taking into account of individual and group level of analysis is sufficient for investigating this multilevel phenomenon.

Another research gap is that previous studies were empirically conducted after IS had been implemented in organisations. Hence, it can be considered to be “observations made on downstream results of the upstream resistance process” (Meissonier and Houze, 2010: 540). Given this reason, according to them, a lot of acts of resistance were observed from previous research as being task-oriented and related to the non-appropriateness of IS that employees have to cope with. In other words, previous research does not touch all aspects of resistance facing the practitioners during the pre-implementation stage of an IS change, and, as a consequence, the findings of



previous research provide little practical guidance to organisational change managers in addressing and managing resistance to IS change initiatives.

Finally, whereas most of previous research mainly focused on rational explanations of IS resistance (e.g., Klaus and Blanton, 2010; Joshi, 2005), irrational explanations (e.g., cognitive misperception of loss aversion) have their own importance and need to be taken into account when studying this phenomenon (Kim and Kankanhalli, 2009).

Given all the above reasons, there are calls for better theories of resistance to IS change in organisational contexts to assist and guide managers to better IS implementation strategies (e.g., Dwivedi et al., 2012; Laumer, 2011).

### **1.1.3. Justifications for choosing the Core Banking System (CBS): The context and a critical event**

Vietnam, officially the Socialist Republic of Vietnam, is the eastern country on the Indochina Peninsula in Southeast Asia. Since the start of its transition from a centrally planned economy to a mixed economy with greater reliance on markets and increased participation of private financial and non-financial organisations (or the Economic Renovation Policy) announced in 1986, there have been significant evolutions in the banking system, including banking restructuring programs undertaken for the domestic banks such as the decision to permit 100 percent foreign-owned banks to enter the market as per commitment to the World Trade Organisation (Leung, 2009).

In recent years, however, the financial sector has shown signs of financial distress and weaker growth due to deficiencies in financial regulation and supervision (see for details; Ho and Baxter, 2011; Ngo, 2012). In order to address the problems, the reform program was announced by the government in 2010 and officially documented in the Socio-Economic Development Plan (SEDP) approved by the National Assembly in 2011. The content of the program can be extracted as below:

## **SOCIO-ECONOMIC DEVELOPMENT PLAN FOR THE 2011-2015 PERIOD**

During the first two or three years, the plan focuses on realising the objectives of stabilising the macro-economy, ensuring social security, achieving a proper growth rate and strongly expediting economic restructuring and growth model shifting. In the next two or three years, it aims for the basic accomplishment of the economic restructure to serve rapid and sustainable development and make growth, macro-economic stabilisation and social security goals harmonise.

In terms of the orientations on tasks and solutions, restructure the financial market, focusing on commercial banking system and financial institutions, renovate and improve the effectiveness and efficiency of state management over the securities market, the real estate market, and the monetary market, especially the gold and foreign currency market, to prevent dollarization; closely monitor public debt as well as bad debts owed by state-owned enterprises, foreign loans, and foreign invested capital, especially investments in real estate and securities market, and sources of call loan.

In the meantime, enhance business governance capacity, publicity and transparency while adopting policies to enable financial institutions to fully tap their internal strengths, restructure, reduce production cost, and increase their operation efficiency, production and competitiveness.

**Vietnamese Government Official Website**

*Source:* GOV (2015)

With an ever more competitive and regulated banking environment such as Vietnam, the AlphaBank (pseudonym for a local bank selected for this study) was undergoing considerable restructuring. The kinds of restructuring involved included the CBS (a central processing system providing the basic account management features and information about customers and their accounts) modernisation to improve the bank's operation and competitiveness; as otherwise it would inevitably lag behind foreign competitors. This was important because banks from other countries were at that time permitted to do business in Vietnam with the same right and privileges as local banks (De Waal et al., 2009). Before the CBS upgrading project, the bank's system (based on 2-tier architecture) was seen as nearing the end of its useful cycle.

In particular, although the system had given the bank competitive advantages in operational efficiency (e.g., minimising maintenance at the branch level; decision-making support solutions) and customer relationship management (e.g., real-time management; prioritising valuable customers), it had many limitations (e.g., heavy network load, slow transaction recovery time, and limited functions). Similar to the points figured out by Jaggy (2013), the AlphaBank considered its CBS replacement because of the following needs:

- No or limited support on banking laws and regulations issued by the Basel Committee on Banking Supervision (e.g., Basel II, Basel III)
- Multiple customer views and complex process are not easily integrated with the existing technology infrastructure
- Innovative, highly interdependent product packages are not supported by the existing CBS, making it difficult to launch new products/services
- Technology inflexibility demands lengthy deployment cycles

Such IS change happened to an extent in my workplace. As I used to be a credit controller at the AlphaBank, my responsibilities were to control and monitor various steps in loan processing to ensure that all loan applications were carried out timely and efficiently. Typically, when a loan application is received the loan servicing needs to be initiated in the CBS by a loan officer. By doing so, each department of the bank can operate autonomously as well as be able to access all the data for tracking and reporting. During a loan process, my role involved providing support and guiding the loan officer to perform credit operations on the system; ensuring the fulfilment of financial legality before submitting the application to the branch director for consideration and approval. In this regard, in-depth knowledge and experience on using the CBS was one of the key requirements for my job.

While the CBS upgrading project at the AlphaBank seemed less relevant to a business-oriented employee like me, I have characterised this event as critical in several aspects. First of all, the CBS upgrading project generated strong emotions among staff engaged in the event. In particular, the CBS should not be seen as a separated system within the bank but instead as the sum of all information technology components in which different modules (e.g., general ledger module, deposits and loans module, human resource and payroll module) were integrated into the CBS. However, since the CBS had been custom made for the AlphaBank over

time to fulfil its local tactical goals, the system was difficult to be architected for change and variation. In other words, the CBS change would not only affect the future operation of each department involved but also the future financial well-being of the bank as a whole. Hence, the bank found itself in a dilemma when deciding whether to keep the status quo (leading to the inflexible system that would be unable to meet business demands) or replace the legacy system (requiring strategic focus and excellent knowledge of variation at the bank's situation). These requirements were hard to meet even for CBS vendors that make their living from mission-critical banking systems (Microsoft, 2008). Moreover, the event was a moment when decisions between IT staff and business-oriented staff would be made. Nevertheless, conflict and polarisation arose with a focus on equal opportunities and benefits brought by the event. Since 2011, several meetings about the project for upgrading the CBS have turned out to be unsuccessful. At the time of this study, the CBS upgrading project is still seen at the pre-implementation stage in which the contract with the appropriate vendor has not been made. The delay in the upgrading project raised many questions which not only involved the costs and benefits brought by the project but also why the bank's employees resisted the system change. Finally, the topic was chosen due to my research interests which mainly revolve around technological change and its impacts on the social and business environment, especially in the financial industry. I had been trained in this industry and got Bachelor Degree in Economics at the University of Economics (Vietnam). I also held Master Degree in Business Administration from the Northumbria University (United Kingdom) and Master of Science in Management and Business Studies Research from the Kingston University (United Kingdom). Up to the time of this study, I am a member of Vietnamese Institute of Information Technology (IOIT), Information Technology Telecommunications and Electronics Association (techUK), and British Academy of Management (BAM). Having started my career since 2004, I have had rich opportunities to be involved in different technological improvement efforts both as a target for the improvements and as a researcher of the improvements. Few of among improvement efforts that I participated in, for instance, include the implementation of the Loan Origination System and the Mobile Banking Services. As a practitioner who has many year experience on management and the system usage as well as a researcher in the IS field (Le, 2014), the event had sparked my interest in how to deal with resistance to the CBS change in this case.

## **1.2. Research aim and objectives**

This study aims to develop a framework which will be of use to practitioners for understanding and managing resistance to IS change, with specific reference to the project of upgrading CBS at the AlphaBank in Vietnam. At the baseline, the first objective of the study is to investigate why and how resistance to IS change takes place at the IS pre-implementation phase from a multiple-level perspective. The reasons behind this objective are not only due to the current status of the CBS project at the AlphaBank (which is at the pre-implementation phase) but also the importance for understanding resistance at this phase. As discussed previously, by focusing on the pre-implementation phase, I could anticipate potential conflicts and users' resistance that are likely to evolve when choices and decisions regarding the project are going to be made. Consequently, the findings of the study will touch all aspects of resistance rather than just rely on observations made on downstream results of the upstream resistance process as discussed by Meissonier and Houze (2010).

Additionally, understanding resistance at this first step can be catalytic for the success of the rest of the project at the AlphaBank since this step involves most of the key decisions about the bank's technological innovation. More specifically, because every CBS offered in the market has its own standardised processes and functions and some of which cannot be customised, the bank's decisions on the CBS change will not only reform the backbone of its system infrastructure but also affect its service portfolio and operational process. Therefore, once the decisions on this project have been made, they are likely to affect the future direction of the bank's business model. In other words, the focus on this pre-implementation stage is considered to be important as such big project like the CBS change is likely to impact on the bank for many years as well as set it on a specific future direction.

Based on the investigation of the first objective, the next objective is to identify appropriate different change management strategies according to the reasons for resistance. This set of change management strategies is then evaluated to examine whether it helps achieve satisfactory results.

In order to help understand and achieve these objectives, two fundamental research questions and sub-questions needed to be answered include:

1) Why and how does resistance to the CBS upgrading project occur at the AlphaBank at the pre-implementation phase?

- 1.1) What are the key environmental problems that the AlphaBank is currently facing that has led to the postponement in the CBS upgrading project?
- 1.2) What are the organisational factors that prevent the CBS upgrading project?
- 1.3) Why do some groups of members engage in resistance behaviours toward the CBS upgrading project but others do not?
- 1.4) Why do some members of the AlphaBank resist the CBS upgrading project?

Addressing these questions will help me to explore various causes of resistance from a multiple-level perspective. The reasons for asking these questions are due to two reasons. First, although I believe that studying resistance to IS change is more associated with internal organisational network than external environment, I cannot reject the reality that there is some impact of the external environment on forming individuals' perceptions toward an IS change. Second, as argued by Lapointe and Rivard (2005), the nature of resistance to IS change is multilevel and that instead of treating resistance to IS change as a black box, taking a multilevel perspective is seen as one way to open the black box and enhance our understanding of the phenomenon.

2) How can the major causes of resistance toward the CBS upgrading project be managed at the pre-implementation phase?

- 2.1) Among various causes of resistance, what are the major ones that need to be addressed to foster the CBS upgrading project?
- 2.2) What are the change management strategies that can be applied by the AlphaBank's top management to solve these major causes of resistance?
- 2.3) What are the outcomes of the resolution actions?

These questions aim to explore suitable methods or approaches that can be used by the AlphaBank's top management to bring about this IS change and evaluate the outcomes of their applied solutions, as perceived by the AlphaBank's members who participate in this change process. In overall, the answers for these two fundamental questions facilitate a critical understanding of current practices at the AlphaBank and justifications for the improvements to those practices.

### **1.3. Research contributions**

One primary theoretical contribution of this research will be in investigating why and how resistance to IS change occurs at the pre-implementation stage. Furthermore, this research will also add to the existing knowledge on the IS literature by adopting a multilevel perspective of resistance suggested by Lapointe and Rivard (2005). Specifically, while previous research usually examine resistance to IS on either the individual level (e.g., Bhattacharjee and Hikmet, 2007; Kim and Kankanhalli, 2009) or at the group level (e.g., Meissonier and Houze, 2010), this research will allow for a multilevel of analysis. By doing so, the results can be applied to a more dynamic situation and enable us to uncover “how factors from different levels of analysis combine to shape and constrain social phenomena in ways that we otherwise might not discern” (Hackman, 2003: 921).

In addition to the above, another contribution will be in the theoretical approach used to study this phenomenon. Unlike previous research in which the researchers sought either to investigate which, among different models, best explained the resistance phenomenon (e.g., Klaus and Blanton, 2010; Kim, 2011) or to develop a partial model to explain a given outcome (e.g., Bhattacharjee and Hikmet, 2007); the motivation for this study is different in the sense that it aims to take advantages of the complementarity of several models (e.g., each model will be applied to explain the resistance phenomenon at each level of analysis independently) rather than comparing their explanatory power. By alternatively analysing the resistance phenomenon with each different model for each level of analysis (i.e., status quo bias theory, Markus’s political variant of the interaction theory, and Weisbord’s six box model) (see Section 2.4 for details), this study will show “how alternative conceptual lenses lead one to see, emphasise, and worry about quite different aspects of an event” (Allison, 1971: 5).

In terms of practical contribution, the proposed framework will provide managers with a better understanding of the reasons for resistance to IS change as well as possible IS implementation strategies that they could take into account. In other words, since organisational IS change and resistance often go hand in hand, the framework can be beneficial because it helps managers to draw attention to problems at the IS pre-implementation stage so that unresolved issues can be addressed

appropriately. Furthermore, the outcomes of their large investments in terms of time and money associated with the new system implementation can be enhanced.

#### **1.4. Outline of the research**

This chapter formed the foundations for the research. It explained the research rationale, both in terms of practical and theoretical concern. Then the research aim and objectives were formulated. Next, the research contributions were briefly discussed. In Chapter 2, I will firstly review the literature on organisational change to gain a better understanding of resistance to organisation change, including noticeable change theories and change management models. Also in this chapter, an extensive literature review on the concept of resistance, different perspectives and theories on sources of resistance, as well as strategies for managing resistance in the IS field will be carried out to: 1) Clarify the research gaps which has been identified above; 2) Consider different appropriate strategies to manage IS resistance; 3) Identify guiding templates or models that can be used to investigate sources of IS resistance in this research. In Chapter 3, I will explain in details the underlying methodology of this research as well as address its quality criteria and ethical considerations. Chapter 4 will present the design and procedure for my research at the AlphaBank. The findings of the research will be presented in Chapter 5. Finally, conclusions as well as recommendations for further research will be provided in Chapter 6.



## CHAPTER 2: LITERATURE REVIEW

### 2.1. Introduction

Organisational technological change is important for short-term competitiveness and long-term survival (Pugh, 2007), but it also poses managerial challenges (Benamati and Lederer, 2010). A recent article in the *IBS* (International Business Systems) *Journal* (Mosdell et al., 2013) reported case studies of banks around the world finding themselves in difficulties to get their CBS replacement by potential organisational employees. For instance, Mark Jenkinson, a partner at Capco global business and technology consultants and formerly of Temenos - a global banking software company, insisted that technology is not a determining factor in the fate of CBS project because most of modern CBSs in 2013 can do basic product processing, look after customers and offer a compelling digital experience (Mosdell et al., 2013). Perhaps, the main reason for the lack of progress stems from the fact that so many issues are people-related rather than technology-related, as discussed in another article in the *Wall Street Journal*:

“Breaking through the wall of resistance has been a huge challenge, because most people would rather keep doing things the way they’ve have been done for decades.” (Essick, 2005: 1)

This resistance issue might become even more difficult for the practitioners in Vietnam when most of the research in organisation change management were conducted in Western countries (House et al., 2004). For instance, according to Cheng et al. (2004), whereas a Western leader often shows personal charisma and intellectual inspiration, an Eastern leader usually displays authority, control, and image building. Such cultural differences may lead to different management styles and practices (Wang and Clegg, 2002) and, as a result, it may lead to either more severe resistance to change or less from the followers. In other words, because of the requirements for respect and obedience from the leader in the East, it may affect the followers’ intention to express their resistance behaviour, especially when this is often seen as negative reaction to an organisational change.

However, according to Cheng et al.'s (2004) findings, both Western and Eastern leaders do have some common characteristics and that they all care greatly about their followers' feelings. Since resistance to change can be seen as emotional and behavioural responses by the affected followers (Rivard and Lapointe, 2012), both Eastern and Western managers do care about the issues associated with resistance and how to manage them appropriately regardless of their cultural differences. Pugh (2007) complemented this argument by stressing that there are, in practice, many modern organisations following change management strategies which were formulated by accident or problems at hand rather than by sharing the national culture or favouring the management of consistency. Moreover, an empirical research conducted by Oreg et al. (2008) showed that dispositional resistance to change holds equivalent meanings across nations. Therefore, although the cultural differences will be addressed in the latter part of this study (see Section 6.6), they will not be considered as variables in the present study.

Against this background, the purpose of this chapter is to synthesise, report, and discuss the relevant literature on organisational change and its associated phenomenon, resistance. The first part of this chapter will focus on the literature on organisational change, including noticeable change theories and change management models. Before going into the extant literature on the IS field in the second part, it is believed that the first part will be useful in terms of portraying a broad picture of change management. Finally, guiding templates or models that can be used to investigate sources of IS resistance in this research will be put forward.

## **2.2. Critical review of organisational change management**

### **2.2.1. Definition of organisational change**

Over the last four decades, much research from different disciplines (e.g., psychology, sociology, economics and management) has been conducted to study organisational change (Rizzuto and Reeves, 2007; By, 2005) and, as a consequence, there are various definitions of change. According to Cohen et al. (1995: 396), organisational change is defined as a process of “moving from the known to the

unknown, from relative certainty to relative uncertainty, from familiar to the unfamiliar”. Yet, such definition as above fails to capture the assumptions inherent in different models or theories of change. For example, Moran and Brightman (2001: 111), as strategy theorists, defined organisational change as “the process of continually renewing an organisation’s direction, structure, and capabilities to serve the ever-changing needs of external and internal customers”. From their point of view, organisational change is a cyclical process in which the change leader scans the current situation, determines the desired state and develops a change plan to adopt to the situation in order to ensure good performance and survival of the organisation. Krell et al. (2008: 1205), on the other hand, defined an organisational change as “a unique event in a firm during which organisational structures and processes are modified”. Meanwhile, Ferdig and Ludema (2002: 2) emphasised the role of change leader to bring about change and characterised organisational change as “a management-led action in which systematic interventions are designed to achieve target outcomes”. Even though there are various definitions suggested by strategy theorists, there seems to be an agreement on these definitions that organisational change represents a movement from the present state to a desired future state (Burnes, 2009).

From a different perspective, behavioural and psychological scientists argued that people are central to organisational change. As Elving (2005) emphasised, “since an organisation’s functioning depends on the actions of its member, the organisation can change only when its members’ behaviour changes” (p. 131). Hence, organisational change can be viewed as a process in which “one or more people observe, experience or feel the need for change and then try to persuade others in the organisation to accept and/or bring about the required change” (Saiyadain, 2009: 209). Graetz and Smith (2010), in turn, defined an organisational change as “the process of collecting the right information about the impediments to change and removing them by assuaging organisational members’ fears and uncertainties” (p. 144).

Nevertheless, other researchers viewed an organisational change as involving more than employees’ behaviour or their perception. For instance, Waddell et al. (2011: 4) viewed an organisational change as “a system wide application of behavioural science knowledge to the planned development and reinforcement of organisational

strategies, structures and processes for improving an organisation's effectiveness". Likewise, Amagoh (2008) adopted a broader definition of an organisational change in which change usually involves one or several subsystems (e.g., purpose, strategy, people, structure) of an organisational system and change in any subsystem of the organisation causes changes in others because of their interactions. According to them, the goal of change is then "to improve horizontal and vertical fit of the subsystems with each other, and within the organisation" as well as "fit between the organisation and its external environment" (p. 4).

By integrating different viewpoints discussed above, the following definition is used in this study:

*Organisational change is an on-going system wide effort led by the top management to enhance congruence among organisational subsystems and between these subsystems and the environment by identifying the impediments to change and developing appropriate solutions.*

This definition helps to furnish a clear conception of organisational change by characterising it as a broad phenomenon that involves an entire organisation. This contrasts with approaches that focus on one or few aspect of an organisational system (e.g., training and development). In these approaches, attention is narrowed to individuals within an organisation or the improvement of particular processes (e.g., job design). The approach to study an organisational change in this study, on the other hand, advocates understanding the organisation as a living system. Since it is a living system, understanding its behaviour requires attention to narrative (e.g., its story), patterns of behaviour between its parts, and inter-relationships between those parts (Beerel, 2009). In addition, because an organisational change takes place on various levels due to such relationships, it should be seen as an on-going system wide effort led by the top management. This does not to state that the top management manage the change process based solely on their experience and perspective. Instead, the change management process should be seen as emergent from within and around the organisation as the organisation's members cope with an uncertain and changing environment. The top management are the creators of the context and conditions (e.g., their approval and support) in which an organisational change can be brought forward. This focus will result in the improved ability of top management to solve

the organisation's problems in strategy and structure. Meanwhile, other approaches to change, such as training and development, typically have a narrower focus on the skills and knowledge of organisation's members.

Regardless of various definitions discussed above, certain concepts are common across various researchers such as types of change, degrees of control over the change process, forces or sources of change and the targets of change. These common concepts are noted within key sources of change literature (e.g., Burnes, 2009; Carnall, 2007; Hayes, 2014; Poole and Van de Ven, 2004). As these scholars studied an organisational change, these concepts became critical points of concern in their analyses. Types of change refer to *what* of change (Section 2.2.2). Degrees of control over the change process (i.e., planned versus emergent change) refer to *how* of change (Section 2.2.3). Lastly, forces or sources of change examine the *why* of change and the targets of change refer to the *outcomes* of change (Section 2.2.4). These concepts will be the focus of the subsequent sections before engaging in discussion on what is the best approach to study an organisational IS change.

### **2.2.2. Types of organisational change**

One of the most striking things about organisational change is that it has become the norm. As Pugh (2007) stated, organisational change is the only constant and is often seen as one of the focal points of life in institutions making a whole organisation response to global developments. Unlike the early approaches and theories to organisational change management, which suggest that organisations cannot be effective if they constantly keep changing, it is now argued that a state of continuous change can become a routine in its own right (By, 2005).

Previous researchers (e.g., Burke et al., 2009; Burnes, 2009; Luecke, 2003) suggested two fundamental types of organisational change to understand this phenomenon including incremental and discontinuous. Yet it must be noted that although different authors (e.g., Balogun and Hailey, 2008; Nilakant and Ramanarayan, 2006; Norman and Verganti, 2014; Senior, 2002) employed different typologies when describing the change process, their typologies are also based on these two fundamental types of organisational change.

According to Burke et al. (2009), discontinuous change is defined as change which involves “simultaneous and discontinuous shifts in strategy (defined by product, markets, and/or technology), the distribution of power, the firm’s core structure, and the nature and pervasiveness of control systems” (p. 181). They further added that discontinuous change also involves a discontinuous shift in the firm’s core values and beliefs. This kind of shift is often generated by major internal problems or by considerable external shock (Senior, 2002). Along with the same thoughts, Nilakant and Ramanarayan (2006) explained that because discontinuous change often involves lot of changes introduced rapidly, this cannot build on existing structures and processes and “tends to replace existing structure, processes and people with newer ones” (p. 100). In this regard, contemporary researchers (e.g., Augsdorfer et al., 2013; By, 2005; Luecke, 2003; Junarsin, 2009) argued that the benefits from discontinuous change are frequently in questions because this change approach will create situations where major reform is required and, therefore, allows resistance to change. As Luecke (2003) argued:

“People need anchors and a certain level of predictability in their lives in order to stay sane and healthy. Doctors, for example, tell us that a job loss or job change, a divorce or loss of a spouse, and a change of household address are all associated with subsequent illness and accidents. Combine two or more of these events and you might as well as keep the phone number of the local ambulance service in your pocket. In this sense, too much change is downright unhealthy.” (p. 104)

In contrast to discontinuous change, incremental change is defined by Luecke (2003: 103) as another approach to change where “the organisation and its people continually senses and responds to the external environment” in small steps as an ongoing process. Therefore, the focus for change is “doing things better through a process of continuous tinkering, adaptation and modification” (Hayes, 2014: 66). Simply put, whereas discontinuous change requires a change of frame (e.g., doing what the organisation’s members did not do before), incremental change focuses on improvements within a given frame of solutions (e.g., doing better what they already do) (Norman and Verganti, 2014). Hence, it is sometimes suggested as a better approach to change to avoid resistance, as Burnes (2009) argued. In his book

*Managing Change*, he took the Japanese approach (*Kaizen*) as an example.

Proponents of the Japanese approach advocate creating a vision of the future and moving toward it in incremental steps at all levels of the organisation. Although the Japanese are extremely able at this approach which has given them a reputation as a nation that makes ambitious long-term plans which are slowly but successfully achieved, it is debatable whether this approach could work in situations where speed is considered as a basis for change. As Klewes and Langen (2008) stated:

“Change in products and services, technology, structures and processes in companies and other organisations have become, not only much more frequent with shorter cycles, but simultaneously more complex. Therefore, the only companies that have a future are companies that change successfully and quickly.” (p. 42)

Yet, speed is a relative not an absolute concept when applied to organisational change. Obviously, other factors such as organisational size and complexity play a part in calibrating the change actors’ thinking about the speed of change (Kotter and Schlesinger, 2008). Achieving the most effective balance is the fundamental challenge for those leading and managing change in complex organisations.

The above review on the organisational change typologies could be extended further by adding other researchers (e.g., Balogun and Hailey, 2008; Bessant, 2005; Dawson, 2003; Maes and Van Hootegem, 2011; Junarsin, 2009). However, the end product would be the same that organisational change can be viewed as running along a continuum from small-scale incremental to large-scale transformational (or discontinuous) change. While the incremental form is geared more to changing the activities, performance, behaviour and/or attitude of individuals or groups, transformational form focuses on the processes, structures and culture of the entire organisation (Randall, 2004). Instead of classifying organisational change according to the notion of a continuum above, researchers (e.g., Kotter and Schlesinger, 2008; Poole and Van de Ven, 2004) argued that organisations need to be continuously transforming themselves through a series of large and small interlinked change projects spanning different levels and functions and having different timescales. In other words, an organisational change can take both forms in reality (Burnes, 2009). As Norman and Verganti (2014) concluded:

“The bottom line is that both forms of innovation are necessary. Radical [discontinuous] innovation brings new domains, new paradigms, and creates a potential for major changes. Incremental innovation is how the value of the potential is captured. Without radical innovation, incremental innovation reaches a limit. Without incremental innovation, the potential enabled by radical change is not captured.” (p. 6)

### **2.2.3. Intentionality: Planned versus emergent change**

Another major difference in organisational change efforts hinges on planned versus emergent change (Bamford and Forrester, 2003; Carnall, 2007). Whereas the planned change approach views change as a gradual, linear, intentional and rational process; the emergent approach is based on the assumption that change is much more complex and the change process should be seen as the outcome of a complex cultural and political process (Hayes, 2014). He further added that the difference between these two approaches is in whether the end point can be specified in advance:

“Blueprint [planned] changes are those where the end point can be specified in advance...Often, however, it is not possible to specify the end point in advance of implementation. While a need for change might be recognised, for example because the organisation is losing market share or failing to innovate as fast as competitors, it may be less obvious what needs to be done to improve matters...In these circumstances, a blueprint approach to change is inappropriate. Planning needs to be viewed as a more open-ended, iterative process that emerges and evolves over time”. (p. 31)

Sharing the same view with Hayes (2014), Poole and Van de Ven (2004) explained the distinct characteristic between these two approaches by highlighting the degree to which change can be choreographed, scripted, or controlled. In particular, they stated:

“Theories of planned change specify ways to manage and control change process. Theories of unplanned [emergent] change, on the other hand, imply



that change is to some degree a force in its own right, susceptible to channelling, but not necessarily to control or management” (p. 4).

Regardless of the difference, most research in the change management focuses on the planned change approach (Poole and Van de Ven, 2004). The planned change is a term firstly coined by Kurt Lewin’s (1947) three-step model (including unfreezing, moving, and refreezing) to differentiate change that is intentionally embarked upon by an organisation. In his model, the stability of human behaviour is based on a quasi-stationary equilibrium supported by a complex field of driving and restraining forces. Thus, he argued that the equilibrium (the forces of inertia or the inability of individuals to change) needs to be destabilised (unfrozen) before old behaviour of individuals can be discarded and new behaviour successfully adopted. In order to shift the equilibrium toward the direction of the planned change, the change actors need to increase the driving forces, or decrease the constraining forces, or both at the same time.

The origin purpose of this three-step model was to resolve social conflict in society, including conflict within organisation (Pugh, 2007). In organisational terms, its origin purpose is to focus on improving the effectiveness of the human side of the organisation (Burnes and By, 2012). However, although the planned change approach is long established and held to be highly effective (e.g., Bamford and Forrester, 2003; By, 2005; Nilakant and Ramanarayan, 2006), it has been criticised since 1980s when researchers moved their focus from individual and group behaviour change to organisational transformation initiatives as a whole (Carnall, 2007; Cummings and Worley, 2008; Poole and Van de Ven, 2004; Stacey, 2003). Firstly, it was argued that the planned approach focuses on small-scale and incremental change and it is thus not applicable to situations that require rapid and transformation change (Senior, 2002; Senior and Swailes, 2010). This is particularly relevant where any given change is one of a multiplicity of changes underway. As Carnall (2007: 74) commented, the planned change appears “to be such an over-simplification when looking at the decisions and choices senior executives must make during a period of change”. This is not to argue the planned approach as being without value. However, according to him, such an over-simplification often leads to the inappropriateness of this approach on a wide range of circumstances.

Secondly, the planned approach was developed for organisations operating in a predictable and controlled environment and that they can move in a pre-planned manner from one stable state to another (Bamford and Forrester, 2003).

Nevertheless, an increasing number of researchers (e.g., By, 2005; Cummings and Worley, 2008; Stacey, 2003) argued that the current fast-changing environment increasingly weakens this theory. As Cummings and Worley (2008) argued, planned change models reinforce the belief that the organisation will “refreeze” into some forms of equilibrium following change. In the face of increasing globalisation and technological change, it is unlikely that change will ever “be over” (or no reference end- point). Hence, according to them, “organisation members must be prepared for constant change in a variety of organisational features that are not obvious in most models of planned change” (p. 40). Similarly, Burnes (2009) added that organisational change is often more a continuous and open-ended process than a set of discrete and self-contained events. Thus, he questioned the utility and practicality of the planned approach.

Finally, the planned approach is based on the assumption that common agreement can be reached, and that all parties involved in a change project are willing and interested in implementing it (Bamford and Forrester, 2003). This assumption clearly ignores organisational politics and conflicts, or at least assumes that such conflicts can be easily identified and resolved (By, 2005).

In response to the criticisms of the planned approach, the emergent approach has gained ground by emphasising that only by continuous change and adaptation will help organisations be able to keep aligned with their environment and thus survive (Burnes, 2009). Moreover, rather than seeing an organisational change as top-down driven by the change actors or managers, the emergent approach more focuses on the bottom-up driven by the change recipients (Bamford and Forrester, 2003). When the emergent approach is involved, the responsibility for change is more decentralised and requires changes in the roles played by management who become more facilitative than controlling (Plowman et al., 2007). The rationale underlying this is that because it is impossible for the change actors to effectively identify, plan, and implement the necessary responses in a rapid transformational change, the responsibility for bringing about change should become devolved (By, 2005). In

other words, the emergent approach also contrasts with the planned approach in the sense that calls for the participation or involvement of all employees in the change process (Conway and Monks, 2011).

According to the advocates of the emergent approach, the complexity and uncertainty of both the internal and external environment nowadays makes this approach more practical than the planned approach (Livne-Tarandach and Bartunek, 2009). Under the emergent approach, an organisation is required to be an open learning system where strategy development and change emerges from the way the organisation as a whole acquires, interprets and processes information about the environment (By, 2005). Moreover, as Burnes (2009: 368) figured out, a successful change should be “less dependent on detailed plans and projections than on reaching an understanding of the intricacy of the issues concerned, including the central role played by power and politics in initiating and managing change, and in identifying the range of available options”.

In comparison to the planned approach, the emergent approach is still relatively new and, as a consequence, there is lack of coherence due to a variety of different views (Bamford and Forrester, 2003). Such distinct views, for instance, include creating flatter organisational structures to increase responsiveness by devolving authority and responsibility (Senior and Swales, 2010), creating a culture for change (Dawson, 2003), requiring manager’s skills to manage risk and cope with paradox and ambiguity (Conway and Monks, 2011; Stacey, 2003). The emergent approach is also criticised that it comprises of a rather distinct group of models and techniques that tend to be more united in their scepticism to the planned approach rather than to an agreed alternative (Liu, 2009; Livne-Tarandach and Bartunek, 2009).

Nonetheless, Burnes (2009) concluded that if the truth is that all organisations operate in dynamic and unpredictable environments to which they constantly have to adopt, the emergent approach is then “suitable for all organisations, all situations and at all times” (p. 349). In this case, he added that instead of arguing for a “one best way” for all organisations, it is suggested to have “one best way” for each organisation.

If, as suggested, organisational change is emergent in nature, it is worth restating earlier comments from the literature review discussed so far. Firstly, organisational change is an “on-going” system wide effort aimed at matching the organisational subsystems to the changing environment. Secondly, the role of change actors is not only to plan or implement change but also to create an organisational climate that advocates the participation or involvement of all employees in the change process. Thirdly, although the change actors are expected to turn into facilitators rather than controllers or doers, it is still their responsibility to give direction to the organisation by judging the appropriateness of the change. Finally, as Nilakant and Ramanarayan (2006: 31) stated, “before you change an organisation, the change has to be planned”. This statement refers to the planned process, not the planned outcomes (or a desired end-state). Hence, the critical question here is “how can emergent change be handled?”. In this regard, instead of paying attention to the emergent approach and ignore the planned approach, it is possible to integrate these two approaches (see for details; Livne-Tarandach and Bartunek, 2009). Particularly, as suggested by them, one approach to handle emergent change can be seen as “emergence takes place within planned boundaries” (p. 9) (or planned process of emergent change). These remarks not only help to justify the following theoretical perspectives adopted in this study but also to classify this study in the change management literature.

#### **2.2.4. Theoretical perspectives on organisational change**

In order to understand and explain the process of how and why organisational change, previous researchers have developed concepts, metaphors and theories from various disciplines (Poole and Van de Ven, 2004). Given the complexity of the change management literature, one general way to comprehend or to fruitfully utilise the large literature is to understand the differing perspectives underlying these studies (Scott, 2003). In their pure form, the perspectives share many features of paradigms as described by Graetz and Smith (2010) in their review of change management. They described paradigms as “a structured set of assumptions, premises and beliefs about the way change works in organisations” (p. 139).

While it is beyond the scope of this review to attempt to consider every different theoretical perspective and every theory on organisational change, the four perspectives (with selected theories as examples) to be considered include: evolutionary, teleological, dialectical, and life cycle. These four perspectives are based on the comprehensive review of Van de Ven and Poole (1995) and Poole and Van de Ven (2004) who argued that these four more or less distinct perspectives can serve as ideal categories for the explanation of change and innovation processes. These perspectives have been later adopted by other researchers who attempt to synthesise the large literature in the field of change management (e.g., Crossan and Apaydin, 2010; De Rond and Bouchikhi, 2004; Henderson et al., 2011).

The below review will be presented and discussed using the framework: 1) Major assumptions of each perspective; 2) Some selected theories for each perspective as examples; 3) Key activities for bringing about change; 4) Benefits and criticisms. A summary is shown in Table 2.1. Overall, the change management literature does not see resistance to change as a separate phenomenon but instead as a part of the change process. Moreover, each perspective seems to enhance our understanding in some aspects of organisational change but bypass others and therefore suffer from some interpretive drawbacks. For instance, the evolutionary theories provide an enhanced appreciation of the nature of the interplay between an organisation and its environment but they have been criticised for not focusing on the individuals and groups. Likewise, the dialectical theories bypass the impact of the environment or conflict bases external to the organisation. Similarly, the life cycle theories show how resistance occurs but do not show how to intervene to foster the transition between stages. Perhaps, the teleological theories are no doubt the most common encountered in the organisational studies because a vast majority of the studies that describe how change is managed are all subsumed under the teleological perspective (Demers, 2007). Given the research aim and objectives of the study (as outlined in Chapter 1) which not only involve understand resistance to change but also how to manage this phenomenon, consideration will be given to the teleological theories, particularly the strategic choice theory and organisational development theory, since it forms the basis for this research. By adopting the teleological perspective, the assumption underlying this research is that every organisation is goal-oriented and resistance is a consequence of lack of clear goal setting. Whereas the teleological

perspective is criticised in the literature as a planned approach due to the assumption focusing on the prerequisites for achieving an end goal (Nordheim and Paivarinta, 2006), other researchers (e.g., Burke, 2013: 172; Hickman, 2010: 47; Poole and Van de Ven, 2004: 378; Scott, 2003: 182; Van de Ven and Sun, 2011: 61) views teleology as open to “modification of goals” in a complex environment and, thus, illustrating the ability to handle emergent change (e.g., planned process of emergent change). In other words, it is less of a precise activity sequence and more a set of principles and values guiding the change actors. Therefore, “it is planned but reflexive and offers insight into the process of designing and managing change” (Williams et al., 2013: 237). Furthermore, by seeing organisations as continuously changing open systems which have important internal subsystems but also interact with their environments (Burke, 2013), the teleological perspective offers a more adequate theoretical framework for analysing change in complex organisations.

Nevertheless, since the main criticism of the teleological approach is its porous boundary and foci confusing (e.g., a batch of unrelated techniques and processes), it therefore needs to complement with other theoretical perspectives to identify its theoretical lenses (Jones and Brazzel, 2006). As Graetz and Smith (2010) argued, rather than focusing on one theoretical or philosophical perspective at the expense of competing perspectives, “the value to practice is in developing an understanding of the nexus between multiple philosophical perspectives” (p. 150).

**Table 2.1: Summary of four distinct theoretical perspectives on organisational change**

| <b>Theoretical perspective</b> | <b>Evolutionary</b>  | <b>Teleological</b>                   | <b>Dialectical</b>  | <b>Life Cycle</b>   |
|--------------------------------|--|---------------------------------------|---|---|
| <b>Reasons for change</b>      | Circumstances, situational variables, and the environment faced by an organisation | Change actors see change as necessary | To balance of power or eliminate conflicts among its opposing members | Change is a natural progression that cannot be stopped or altered |

|   |  |   |  |   |
|---|--|---|--|---|
| <b>Reasons for resistance</b>                       | Change initiatives lead to misalignment between the organisations and the changing environmental conditions                | Change actors fail to establish a unifying goal among the organisation's members  | Change initiatives lead to imbalance of power or conflicts among its opposing members                                    | Conflict and polarisation around personal issues; Misfit between the individual's expectations and realities  |
| <b>Change process</b>                               | Adaptive-based process   | Open-rational, Purposeful-based process   | Occasional, Situational-based process  | Natural-based process   |
| <b>Key activities</b>                               | Analysis of the internal organisational system to ensure the alignment or fit between the organisation and its environment | Giving precedence to strategic decision-making and careful planning towards organisational goals  | Groups respond to and deal with the conflicts in many different ways and the resulting path will depend on the situation | Reconfigurations of working groups and relationships; Mastery of people's new skills, knowledge, and working routines   |
| <b>Change outcomes</b>                              | New structures or organising principles  | New structures or organising principles   | New working rules; New individual identity (e.g., a new group belonging)   | New group or individual identity (e.g., a new stage belonging)  |
| <b>Key metaphor</b>                                 | Organic growth; Self-organising organism   | Change-master   | Social movement  | Organic growth  |
| <b>Noticeable theories/models and key author(s)</b> | Resource dependence theory (Pfeffer and Salancik, 1978), Contingency theory (Burns and Stalker, 1961; Woodward, 1965)      | Strategic choice theory (Child, 1972), Organisational development theory (Lewin, 1946), Organisational learning theory (Cyert and March, 1963; Argyris and Schon, 1978) | Paradoxical theory of change (Smith and Berg, 1987), Political variant of the interaction theory (Markus, 1983)          | Model of group development (Tuckman, 1965; Tuckman and Jenson, 1977), Personal transition curve model (Adam et al., 1976)                                       |
| <b>Benefits</b>                                     | Environmental and situational focus; Open system approach; Large empirical support   | Clear key role of change actors; Collaboration on problem-solving; Employee empowerment; Large empirical support  | Importance of conflicting ideological imperatives; Irrational aspects of a regressive change                             | Developmental sequence of change; Theoretical role of core problems at each stage; Shift to focus on the people instead of the change actors or the environment |

|                   |  |   |  |  |
|-------------------|--|---|--|--|
| <b>Criticisms</b> | Lack of focusing on individuals and groups; Only focusing on a limited set of variables within the external and internal environment | Porous boundary and foci confusing; Overemphasis on inter-personal values; Ignoring the organisation's value of efficiency, hierarchy, and accountability | Lack of emphasis on the environment or conflict bases external to the organisation | Lack of empirical support; Theories were mainly originated in the biological field rather than in the change management area; Unable to address the unpredictable elements in a tumultuous environment |
|-------------------|--|---|--|--|

*(Presented by the author based on Poole and Van de Ven, 2004, pp. 374-97)*

### **2.2.4.1. Evolutionary perspective**

Major assumptions: The most long held change philosophy has been related to evolutionary biology (e.g., child development) (Graetz and Smith, 2010). The earliest study, based on biological investigations of change, focused on change as a slow stream of mutations, gradually shaped by environmental influences (Hannan and Freeman, 1977). The major assumption underlying the evolutionary perspective is that change is dependent on circumstances, situational variables, and the environment faced by each organisation (Cross, 2014). As Hannan and Freeman (1977: 957) argued, “for wide classes of organisations there are very strong inertial pressures on structure arising from both internal arrangements (for example, internal politics) and from the environment (for example, public legitimization of organisational activity). To claim otherwise is to ignore the most obvious feature of organisational life”. From this perspective, organisations evolve over time and so do their environments, suggesting that organisations cannot be changed drastically because of inertial pressures on organisational structure, but instead need to emerge as change managers become aware of new situations (Langley et al., 2007). In this case, according to Poole and Van de Ven (2004), self-organising is also usually known as a key metaphor for change under this perspective because change is mostly unplanned and requires an adaptive-based process (or a process to retain a stable state by continuously looking for equilibrium between the organisation and its environment).



Examples: Many theories have been formed under this perspective. Selected theories for discussing include resource dependence and contingency theory. Each of them is outlined as below:

\_ Resource dependence theory: is a common evolutionary approach to understand change. It emphasises organisational adaptation to environmental uncertainty through active organisational management of resource flows and interdependencies (Pfeffer and Salancik, 1978). As they put it, “survival of the organisation is partially explained by the ability to cope with environmental contingencies; negotiating exchanges to ensure the continuation of needed resources is the focus of much organisational action” (p. 258). Hence, successful organisations over time are the ones which are the best at obtaining, developing, and deploying scarce resources and skills (Graetz and Smith, 2010). This theory also stresses the effect of organisational constraints and dependence on other organisations that control critical resources (Hillman et al., 2009). With recent technology playing a key role in the competitive advantages of the organisation, this theory has been applied in the IS field for managers to understand the consequences of their IS outsourcing decisions for achieving cost savings (e.g., Alvarez-Suescun, 2010; Lahiri and Kedia, 2011). According to Straub et al. (2008), organisations outsourcing IS activities that are not their core competencies can concentrate energies on distinctive resources. Moreover, IS vendors/outsourcers can drive down the costs of production and technical expertise by spreading these expenses over a large client base. Hence, organisations are also able to benefit indirectly from the economies of scale through attractive pricing of IS products and services offered by IS vendors. Nonetheless, decisions to outsource can have an adverse impact on the organisation. Such adverse impact may include performance risk (e.g., not deliver the expected level of service), strategic risk (e.g., lack of control and high dependency on the outsourcers), financial risk (e.g., hidden costs associated with the IT implementation) or psychosocial risk (e.g., loss of jobs or loss of authority over resources) (Gewald and Dibbern, 2009). In sum, this theory appears to be well established in terms of the general relationships between organisations, their environments, and the actions that managers take to reduce these dependencies (Cross, 2014; Hillman et al., 2009). The key challenge associated with this theory, however, is that certain key concepts such as resources or

capabilities are unobservable or difficult to measure directly (Barney and Mackey, 2005).

\_ Contingency theory: is also referred as “open systems theory”, originated from the work of Von Bertalanffy (1968), in which an organisation is seen as a system combining many interdependent subsystems with the openness to its environment (Demers, 2007: 33; Rasche, 2007: 75; Scott, 2003: 96). In the field of management, contingency thinking is most commonly associated with Burns and Stalker (1961) and Woodward (1965) who both suggested that there is no universal or “one best way” approach for management action and that organisational structure and practice should depend on contingent variables (e.g., the nature of the environment or technology being used). According to Smith and Lewis (2011), the contingency theory assumes that a successful change can be achieved when there is an alignment or fit among internal organisational elements (e.g., technology, structure, strategy, culture) and with its external environment. Thus, most contingency theorists maintain a teleological view in which change management is seen as goal pursuit by taking action to adjust organisational structure in order to establish or re-establish fit (e.g., Battilana and Casciaro, 2012; Nissen and Burton, 2011). For instance, using the contingency theory of “fit” as a foundation, Stoel and Muhanna (2009) found the contingency theory to be appropriate to the development of “strategic fit” between the demands of the organisation’s competitive environment and its IT capabilities (i.e., internally-focused and externally-focused capabilities). In another study, Khazanchi (2005) found that there are four critical factors (i.e., internal/external business and technological environment variables; organisational readiness and trading partner support; financial impact; workflow productivity) that must be assessed by businesses to establish the “fit” between the organisation and the target technology, thus enhancing the likelihood of a new IT implementation success. Among various developed models based on the contingency theory, the Technology-Organisation-Environment (TOE) framework developed by DePietro et al. (1990) and the Diffusion of Innovations (DOI) suggested by Rogers (1995) are the most frequently cited in the IS literature (e.g., Arpaci et al., 2012; Oliveira and Martins, 2011). In brief, the TOE framework identifies three aspects of an organisation’s context that influence the process of technological innovation decision making including: *technological context* (both internal and external technologies relevant to

the organisation such as current practices and equipment internal to the organisation as well as the set of available technologies external to the organisation), *organisational context* (the resources and the characteristics of the organisation such as its size and managerial structure), and *environmental context* (the arena in which an organisation conducts its business such as its industry, competitors, and the presence of technology service providers) (Alshamaila et al., 2013). Meanwhile, the DOI theory (operating at the organisational level) contends that innovativeness is related to such contingent independent variables as *individual (leader) characteristics* (the leader's attitude toward change), *internal characteristics of organisational structure* (the degree of centralisation, complexity, formalisation, interconnectedness, organisational slack, and size), and *external characteristics of the organisation* (system openness). In overall, despite the slight difference between the TOE framework and the DOI theory, they both enable the IS researchers to think beyond the technological characteristics of the innovation and, thus, "to see both the forest for the trees and the trees for the forest" (Cua, 2012: 306). Nonetheless, the flexible nature of the contingency theory means that variables such as inertia, inflexibility, resource immobility and industry pressure often make the fit between factors difficult to foresee (Graetz and Smith, 2010). As a result, the search for the best fit is limited or even impossible due to the difficulty for modelling all the contingent factors and their causal links (Burnes, 2009; Demers, 2007). This explains why a vast majority of studies based on the contingency theory in the IS field have been seen relatively little evolution because they have been viewed as aligned with one another and mainly focused on the technological, organisational, and environmental contexts (Premkumar, 2003); rather than offering a competing explanation to the technological innovation decision making process which was also argued as a political process involving various stakeholders (Alsulami et al., 2013). This problem was actually addressed by Rogers (1995) in his book *Diffusion of Innovations* in which he called this the "pro-innovation bias" that "an innovation should be diffused and adopted by all members of a social system, that it should be diffused more rapidly, and that the innovation should be neither re-invented nor rejected" (p. 100). The perceived pro-innovation bias, as exists in the TOE and the DOI as well as other IS contingency models (which are seen as those TOE or DOI-like models), has led critics to question their impartiality because they seem to ally the interests of different stakeholders or technology proponents (Jeyaraj et al., 2006).

Key activities: Under this perspective, the key activities include observation of the environment to adjust the organisation's strategic approach to environmental conditions (Rasche, 2007), analysis of the internal organisational system to ensure the alignment or fit between the organisation and its environment (Burt, 2007), and creation of structures and new organising principles to respond to the environment (Kezar, 2012). However, the end state of the process mainly depends on the situation (Burke, 2013).

Benefits and criticisms: Collectively, the benefits of these theories should not be underestimated. An understanding of these theories provides an enhanced appreciation of the nature of the interplay between an organisation and its environment (Yoon and Kuchinke, 2005). It is also novel to describe change as unplanned and examine organisations as self-organising entities (Poole and Van de Ven, 2004). Moreover, reconceptualising an organisation as an open system also advances our thinking about change, identifies new reasons for and approaches to change (Demers, 2007). Many empirical studies have been conducted to illustrate the strength of evolutionary theories for certain types of changes (e.g., Gunby, 2009; Mason, 2007).

Despite of those benefits, the theories under the evolutionary perspective have been criticised that they was mainly originated in scientific management rather than human-based field and, therefore, they fail to provide needed assumptions about human psychology and the way organisations fit into society (Kezar, 2012). Scott (2003: 57) further added that even though organisations often embrace their specific goals (e.g., profit maximisation), such specific goals “are never the only goals governing participants' behaviour”. Another criticism is that it is difficult to directly link the situational variables and organisational change, controlling all other variables. Hence, the theories under this perspective usually ignore the complexity of organisational life by only focusing on a limited set of variables within the external and internal environment and divorcing the development of management thought from a wider socio-political point of view (Collins, 2005).

#### **2.2.4.2. Teleological perspective**

Major assumptions: The teleological perspective has several names, including intentional change, scientific management, and rational models (Kezar, 2012). Whereas those are common names for this perspective, Scott (2003) called this perspective as open-rational perspective to emphasise its openness to the environment. According to him, this perspective reflects the assumption that “organisations are goal-directed and that change takes place via the conscious efforts of managers to set and reset goals and to manipulate organisational structures so as to adapt to changing circumstances” (p. 182). Graetz and Smith (2010) explained that this philosophical doctrine is known as teleological because the final destination is its guiding logic to its desired ends. In order to make a change happen according to teleological theories, an organisation must be guided by a unifying goal that lends coherence to its activities. When the organisation is comprised of multiple entities, they must agree to a goal and collective action for a teleological motor of change to hold (Van de Ven and Poole, 1995; Van de Ven and Sun, 2011). The outcome of the change process is similar to that in the evolutionary theories: new structures or organising principles (Kezar, 2012). The change-master, using Rosabeth Moss Kanter’s (1983) image, is also usually known as a key metaphor for change under this perspective since the managers or change actors are at the centre of aligning goals (Cross, 2014).

Examples: As with the evolutionary perspective, the teleological perspective constitutes an umbrella under which a number of diverse theories can be joined together. Selected theories for discussing include strategic choice, organisational development, and organisational learning. Each of them is outlined as below:

\_ Strategic choice theory: Instead of depending on the contingencies when making decisions regarding a particular change, other researchers argued that the reverse view may be a case. For instance, Child (1972: 4) was one of the first who argued that “organisational decision-makers may have certain opportunities to select the types of environment in which they will operate” or “may command sufficient power to influence the conditions prevailing within environments where they are already operating”. Hence, this theory is based on the view that the change actors, through exercising a range of strategic options, have the ability to reshape their situations

rather than simply being powerless recipients of such situational variables (Kirchgeorg et al., 2010). In the IS literature, the importance of exercising different choices (e.g., selection of an appropriate system package, selection of the architecture for running the system applications, outsourcing or in-house management) has been emphasised as the key critical success factors (CSFs) for successful system implementation (e.g., Nah and Delgado, 2006; Walden and Hoffman, 2007). The CSFs literature also emphasises the need for top management support as well as the need for a champion to drive the project, mediate between stakeholders and lead a specialist project management team that is able to engage in problem recognition and resolution during the selection and implementation process (e.g., Maditinos et al., 2011; Ngai et al., 2008). Yet, the strategic choice theory has been highlighted for the case in which organisational change objectives or goals are arbitrary in reality (e.g., pursuing a number of conflicting goals at the same time) (Elbanna, 2006). As Pettigrew (2014: 265) argued, “decision-making in organisations is not merely a thought process that balances goals and means, or a choice process in which the environment is discriminated as a limit to choice only through the mind of the decision-maker. Rather, it may be understood as a political process that balances various power vectors”. In such case, Mintzberg et al. (2005) suggested that the choice should depend on the practitioners’ understanding of the situation in order to identify resolution strategies accordingly (e.g., persuasion, bargaining, or confrontation).

\_ Organizational development (OD) theory: Although it is difficult to precisely enumerate the exact values that are essential ingredients making OD more or less uniquely OD (because it is often referred to as normative field of practice), Jones and Brazzel (2006) figured out four key value orientations help form the underlying philosophy of OD including: 1) People are capable of empowered action in the best interests of their organisation, and therefore an organisation that empowers its people is seen to be more effective; 2) Involvement in decision making and direction setting should be broadly rather than narrowly delineated; 3) Change efforts should be client-centred, not practitioner-centred; 4) The desired ends should not be defined in terms of an individual, group, or organisation alone but in terms of their impact on the broader, even global, system (e.g., maximising the profits of a specific organisation should not threaten the environment or negatively affect a community).

According to OD theorists (e.g., Burke, 2013; Coghlan and Brannick, 2005; Cummings and Worley, 2008; Waddell et al., 2011), action research which was developed by Kurt Lewin (1946) is the heart of the OD process. Coghlan and Brannick (2005: 9) briefly explained action research as “an approach to research which is based on a collaborative problem-solving relationship between researcher and client which aims at both solving a problem and generating new knowledge”. Meanwhile, open systems theory can be seen as the key theory in the OD literature since it helps OD practitioners identify important parts of an organisation and how they relate to each other (Ison, 2008). As Greenwood and Levin (2007: 71) put it: “Both [systems approach and action research] rely heavily on an interconnected and holistic view of the world. Humans are understood to exist only within social systems. Social systems are not mere structures, but are processes in continual motion. They are dynamic and historical. They operate within material boundaries and are capable of transforming material living conditions. They are also interlinked, entwining the individual social structures and the larger ecology of systems into complex interacting macro-systems”. Given these distinct aspects, the OD theory is playing an increasingly important role in helping organisations change themselves by rebuilding their strategies, structures and processes as well as helping their members go beyond surface changes to transform the underlying assumptions and values that govern their behaviours (Waddell et al., 2011). The applications of the theory in the IS field include diverse areas such as establishing new work routines (Hartmann et al., 2009); individual training and development (Puhakainen and Siponen, 2010); risk management in software process improvement (Iversen et al., 2004); just to name a few. Nevertheless, because the OD theory has been around since 1950s until today, it has been devolved into a batch of unrelated techniques and processes, seeing almost all attempts to change organisations as potential components of an OD effort. Therefore, this theory has mainly been criticised for its porous boundary and foci confusing (Jones and Brazzel, 2006).

\_ Organizational learning theory: was introduced by Cyert and March (1963) and became popular since the work of Argyris and Schon (1978). According to the organisational learning theory, organisations are capable of containing representations of the environment, in which they operate, in the same fashion that the human brain is said to contain representations of the outside world. Following

this line of reasoning, Cyert and March (1963: 123) concluded that “organisations go through the same process of learning as do individual human beings seems unnecessarily naive”. However, because only individuals within an organisation can learn, Curado (2006: 27) further explained that “the nature of the organisational learning is, implicitly or explicitly, associated to the meaning of individual learning”. In the domain of strategic change management, this theory has become important as it focuses on the way an organisation possesses information and generates knowledge-based resource (Kaya and Patton, 2011). Although each organisation can and should find its own way to become a learning organisation, the process of learning usually consists of the feedback from the environment (external signal), the modifications in goals (signal recognition and interpretation), operation of new rules or routines (experimentation and search), successful programs (knowledge articulation and codification), returning to the beginning of a new cycle by virtue of a new external stimulus (feedback and iteration) (Berkhout et al., 2006). This generic learning process does embrace the assumptions from the evolutionary theories in taking an open-systems approach, but the overall principles reflect the teleological tradition (search and learning are goal-directed) (Poole and Van de Ven, 2004). Despite of the large volume of research on organisational learning, its main problematic aspects are due to its divergent definitions and opinions as well as the problem for transferring theories and practices developed in one culture to another (e.g., Buchanan and Huczynski, 2004; Fagenson-Eland et al., 2004; Thomas, 2003). The same problem can be found in the IS literature since the deployment of an information system includes a lot of context-specific knowledge which cannot be transferred into another context (e.g., Rantapuska and Ihanainen, 2008; Ruiz-Mercader et al., 2006).

Key activities: Since the managers or change actors are the focus of the teleological theories (the change-master), the activities for creating change are mainly organised by them who are responsible for establishing expectations, modelling behaviour, and particularly unleashing individual dynamism (through empowerment and involvement) (Cross, 2014). Approaches consistent with the teleological theories give precedence to strategic decision-making and careful planning towards organisational goals (Williams et al., 2013).



Benefits and criticisms: One benefit of the teleological theories is that the key role of managers or change actors in the change process is clearly identified and made apparent (e.g., seeking to impose a direction upon an organisation) (Graetz and Smith, 2010). Another benefit could be that the key concepts of collaboration on problem-solving and employee empowerment have transformed our understandings on the role of each organisation's member for leading a change project to its success (Kezar, 2012). Finally, because the teleological theories of change are no doubt the most common encountered in the organisational studies (Demers, 2007), their relevance for certain types of change has been proven by previous empirical research (e.g., Ford and Greer, 2005; Hartmann et al., 2009; Zhu et al., 2004).

Nonetheless, a major criticism of the teleological theories could be due to their porous boundary and foci confusing (Jones and Brazzel, 2006). Another criticism may be their overemphasis on inter-personal values (e.g., openness and trust to the extent of employees) (Greiner and Cummings, 2004). As they argued, such attempt for unleashing individual dynamism "often comes at the expense of the design of the formal organisation and its values of efficiency, hierarchy, and accountability" (p. 379).

#### **2.2.4.3. Dialectical perspective**

Major assumptions: Dialectical perspective as discussed by Poole and Van de Ven (2004) is similar to Morgan's (1986) political metaphor of change in terms of their basic assumption. In particular, dialectical perspective is based on the assumption that "organisations exist in a pluralistic world of colliding events, forces, or contradictory values that compete with each other for domination and control" (Burke, 2013: 172). Hence, as Scott (2003: 181) added, an organisational change is explained by "alterations in the balance of power among opposing entities". The name "dialectical" refers directly to the Hegel's (1969) perspective (e.g., dialectics between thesis and antithesis) in which a pattern, value, or norm in an organisation is always present with its polar opposite (Kezar, 2012: 1984). Although power struggles and political infighting may not always be prominent, they are likely to come to the front when resources are limited or organisations are in a changing process, especially in radical change (Burnes, 2009). Under the dialectical

perspective, managers or change actors play a key role within any social movement by developing working rules (not necessarily rational but rather reflect consensus on what is prudent and reasonable) to resolve the conflicts (Van de Ven and Hargrave, 2004). The social movement organisation is also usually known as a key metaphor for change under this perspective (Hensmans, 2003).

Examples: Selected theories for discussing include the paradoxical theory of change and the political variant of the interaction theory. Each of them is outlined as below:

\_ Paradoxical theory of change: This theory, pioneered by Smith and Berg (1987), posits that “group life is inherently paradoxical” and “individual members experience the group as being filled with contradictory and opposing emotions, thoughts, and actions that coexist inside the group” (p. 62). From the standpoint of this theory, an organisational change can be seen as the attempts of the group to resolve the conflicts or tensions among its members and mitigate its negative effects (Poole and Van de Ven, 2004). Because paradox can be used as a lens to the conflict or tension (e.g., exploring how organisations can cope with competing demands at the same time), the paradox literature has become increasingly crowded since the late 1980s (Smith and Lewis, 2011). For instance, previous empirical studies applied this theory including the topics such as tensions between learning and performance (e.g., Bunderson and Sutcliffe, 2003; Van Der Vegt and Bunderson, 2005) or between leaders and employees (e.g., Gibson and Birkinshaw, 2004; Luscher and Lewis, 2008). However, like other theories in the change management literature, one of its criticisms swirl around the lack of conceptual clarity to describe the tensions (e.g., varying terms including paradox, dilemma, dichotomy, dialectic) (Smith and Lewis, 2011). Another criticism involves the suggested strategies to respond to the tensions. Particularly, Clegg et al. (2002), for instance, argued that paradoxes should be seen as persistent and unsolvable puzzles. Therefore, they suggested that a passive strategy such as working through rather than confronting the tensions may help to avoid potentially disastrous conflicts. However, other researchers encourage the change actors to engage anxiety and face challenges surfaced by tensions (e.g., Luscher and Lewis, 2008; Smith et al., 2010).

\_ Political variant of the interaction theory: was originated by Markus (1983) in the IS field. The primary assumption of the political variant of the interaction theory is

that “information systems frequently embody a distribution of intra-organisational power among the key actors affected by its design” (p. 440). Intra-organisational power, as she explained, is an attribute of individuals or subgroups (e.g., department) within the organisation and it can be defined as “the ability to get one’s way in the face of opposition or resistance to those desires” (p. 442). According to the theory, when the introduction of an IS specifies a distribution of power which signifies a loss to certain individuals, these individuals tend to resist the system; and vice versa. Although the theory has been applied and tested in the IS field by other researchers (e.g., Hong and Kim, 2002; Lapointe and Rivard, 2005), Markus (1983) acknowledged the problems of her theory that individual’s behaviour may not represent their feelings adequately because: 1) People may misperceive the loss (or gain); 2) People may feel it is not to their advantage to engage in behaviours (e.g., criticising the system, avoiding it, or trying to bring out the system change) that could be labelled resistance.

Key activities: The dialectical theories focus on groups throughout an organisation as part of the dialectical process. In other words, it is required to have at least two groups to fill the roles of thesis and antithesis (Dawson, 2014). Unlike the teleological theories in which the activities for creating change are clearly organised to achieve the organisation’s desired ends, the activities within the dialectical theories are not the major focus because conflicts are an inherent aspect of human nature (Kezar, 2012). Moreover, if the change actors engage anxiety and face challenges surfaced by the conflicts, the developmental path of dialectically driven change cannot be predetermined or planned. It is because “goals and interests are diverse, rationalities are multiple, so individuals act politically” and, therefore, “when power and politics play a predominant role in organisational change processes the planned change approach to management will not work” (Kickert, 2010: 9). In these circumstances, groups respond to and deal with the conflicts in many different ways and the resulting path will depend on the situation (Graetz and Smith, 2010).

Benefits and criticisms: The key benefit of the dialectical theories is that they reveal the importance of conflicting ideological imperatives in organisations as well as the inescapable axiom that change often brings with it the conflicts or tensions. Given the dualistic nature of technology (e.g., involving several stakeholders in a project),

“the dialectic approach has been used to develop a rich understanding and explanation to understand the way systems developers thinking about inherent contradictions related to development” (Alsulami et al., 2013: 4). Moreover, the dialectical theories also enhance our understandings on a regressive change and highlighted irrationality such as the dialectic emerged between the features of the system packages and the organisation-specific requirements (Nordheim and Paivarinta, 2006). However, the lack of emphasis on the environment or conflict bases external to the organisation (e.g., recession) is seen as its main problem (Cross, 2014).

#### **2.2.4.4. Life cycle perspective**

Major assumptions: Since this perspective sees an organisation as a biological system with a life cycle, some scholars view the life cycle perspective as a sub-philosophy of the evolutionary perspective (e.g., Burke, 2013; Poole and Van de Ven, 2004). However, Graetz and Smith (2010) figured out that whereas the evolutionary perspective is based on the Darwinian concept of natural selection or adoption (e.g., to ensure the alignment or fit between the organisation and its environment), the life cycle perspective focuses on the developmental life cycle of individual organisations. In other words, this perspective embraces a metaphor of organic growth (e.g., child development) but attempts to identify phases in the organisation development process (Scott, 2003). The stimulus for considering the life cycle properties of organisations has also been expanded from research and theory on group and individual during a change event (Bonebright, 2010; Cameron and Green, 2012). Under the life cycle perspective, change happens as a natural progression that cannot be stopped or altered (Kezar, 2012).

Examples: Selected theories for discussing include the model of group development and the personal transition curve model. Each of them is outlined as below:

\_ Model of group development: was developed by Tuckman (1965) and is the most widely and solidly established based on his empirical research. The model indicates that a group development often undergoes a series of predictable transitions including forming, storming, norming, performing, and adjourning (the last stage

was added later in his revision) (Tuckman and Jenson, 1977). According to the model, the group members initially engage in orienting and testing each other, the situation, and the task requirements in the *forming* stage. They then proceed to a stage which is characterised by conflict and polarisation around personal issues, with concomitant emotional responding in the task sphere. Resistance to group influence and task requirements is labelled as *storming*. Resistance is overcome in the third stage (*norming*) in which in-group feeling and cohesiveness develop, new standards evolve, and new roles are adopted. The group members then reach the fourth stage (*performing*) in which interpersonal structure becomes the tool of task activities, roles become flexible and functional, and group energy is channelled into the task. Finally, the last stage (*adjourning*) describes the dissolution or the ending of the group. Although this model has been developed since 1960s, Miller (2003: 122) stated that it is still “the most predominately referred to and most widely recognised in organisational literature”. According to him, it proved useful for practice by describing how people work in groups, enhancing our understanding of the group development process, and providing practitioners a way to foresee the developmental sequence in groups. Yet, researchers (e.g., Bonebright, 2010; Cassidy, 2007) also figured out several key criticisms of the model, including a linear process of group development instead of iterative cycles, unclear explanation of how a group moves from one stage to another, treating the group development process as a closed system rather than addressing other external influence on the group.

\_ Personal transition curve model: Since the process of organisational change is about how people (including leaders because they, after all, are individuals) cope with the often traumatic psychological transitions that accompany change, the area of individual change or “personal change transitions”, which is even more focused on the psychological status of organisational members, has been another focus of research and theory in the change management field (Graetz and Smith, 2010: 144). One noticeable model in this area is Adam et al.’s (1976) personal transition curve model (Balogun and Hailey, 2008). This model assumes that individuals facing changes within organisations can have very similar experiences or pass through predictable stages of development (Cameron and Green, 2012). In the model, Adam et al. (1976) suggested the seven phases of the transition curve that helps to make sense of the feelings and reactions of the change recipients. These phases can be

explained in brief as the following: 1) *Shock*: This first phase describes the reaction when a person is triggered by a change. It represents the misfit between his or her expectations and realities; 2) *Denial*: The person tends to minimise the dissonance experienced or maintain the status quo in the first phase; 3) *Awareness*: When the person realises that the change is unavoidable and, therefore, he or she becomes aware of limits of own competence; 4) *Acceptance*: Or acceptance of reality that the change is necessary. In this case, the person is required to let go of past behaviours and attitudes; 5) *Testing*: The person starts to test new behaviours identified; 6) *Search for meaning*: Learning from the person's success or failure helps create his or her own knowledge; 7) *Integration*: The person takes ownership of his or her new knowledge and, therefore, increases his or her sense of confidence and competence. Similar to other models under the life cycle perspective, this model proved useful for examining the way in which an individual reacts to change (Leahy and Chamberlain, 2008). Yet, at the same time, it has also been criticised for its over-simplicity (e.g., these different stages may overlap; the stages tend to vary depending on the situation) (Cameron and Green, 2012).

Key activities: This perspective differs from other perspectives in that it emphasises people throughout an organisation as critical to the change process. From the standpoint of this perspective, change will be resisted if all members within an organisation are not ready for it (Kezar, 2012). Moreover, it also indicates that without modification or intervention an organisation and its members could not move to the next stage in each associated cycle (Drazin et al., 2004). Therefore, the key activities usually involve, for instance, fundamental alterations to the way in which the organisation is managed; reconfigurations of working groups and relationships; mastery of people's new skills, knowledge, and working routines (Pugh, 2007).

Benefits and criticisms: The life cycle perspective adds to our understanding of organisational logics by pointing our attention to the systematic need to resolve core problems that emerge as the organisation changes. According to Drazin et al. (2004), although some core problems at each stage may exhibit an enduring character, the theoretical role of these core problems is important not only in defining and measuring discrete stages but also in understanding the transition from stage to stage. Moreover, its emphasis on the people throughout the organisation is an important

shift from focusing on the change actors (as in the teleological perspective) or the environment (as in the evolutionary perspective) (Kezar, 2012). Within the IS field, although understanding the IS change from the life cycle perspective is underdeveloped, Fidock and Carroll (2012) argued that the innovation diffusion process model proposed by Rogers (1995) and other models of the innovation adoption and diffusion process (e.g., Lin and Lee, 2006; Shih, 2008) can be seen as life-cycle models in which change is explained by reference to the sequence of phases through which the system of interest passes. In fact, the innovation diffusion process for individuals has five stages (i.e., *knowledge stage* where a potential adopter becomes aware of an innovation and develops some understanding of its capabilities; *persuasion stage* where the formation of either positive or negative attitudes towards an innovation occurs; *decision stage* where a person decides either to adopt or to reject an innovation; *implementation stage* where a person puts an innovation to use; and *confirmation stage* where either the innovation decision is reinforced or an earlier decision to adopt or reject a system is reversed) and these stages are similar to the stages in the personal transition curve model as discussed above. Regardless of the benefits of the life cycle perspective for understanding and explaining the “diffusion” (e.g., how the innovation is diffused and accepted) in the change process, Burnes (2009) questioned the contributions of the life cycle theories because of their lack of empirical support. This criticism is mainly due to the fact that most of life cycle theories were originated in the biological field (e.g., clinical biology) rather than in the change management area (Cameron and Green, 2012). Another criticism associated with the life cycle theories involves their predetermined stages and, therefore, they cannot address the unpredictable elements present in a tumultuous environment (Cross, 2014).

#### **2.2.4.5. Conclusions**

Four distinct perspectives on organisational change have been reviewed in this section by focusing their assumptions, noticeable theories and models under each perspective, key activities to bring about change, the benefits and drawbacks of each perspective. Although these perspectives aim to describe a change process in relatively simple, abstract terms as a way to untangle a complex change;

understanding these perspectives not only pulls our attention to the requirement for multiple theoretical lenses but also guides us on how a complex change can be managed in sustainable and constructive directions over time. Particularly, juxtaposing these four perspectives provides insights for deciding which model of change is appropriate in specific situations. For instance, as Van de Ven and Sun (2011) argued: 1) The evolutionary theories apply when multiple units or groups within or between organisations compete for scarce resources. Evolution breaks down when these units are homogeneous and when resources are abundant. The breakdown in evolution theories can be remedied by applying the life cycle theories; 2) Regulated life cycle theories are appropriate for managing many recurrent and predictable organisational changes. Yet, they break down when the rules are wrongly designed and when people or units resist implementing the change mandates, resulting in sabotage of or mere compliance with mandates. The frequently observed breakdown of resistance to mandated changes in a life cycle model can often be resolved by involving the people affected in a teleological model of planning and goal setting. People, after all, prefer to implement plans of their own making rather than those mandated by some external parties; 3) The teleological theories apply when the organisation's members agree on and move toward a shared organisational goal. The theories break down when individuals cannot reach consensus on a goal. While this disagreement denotes a breakdown in implementing teleological theories, it serves as the generating mechanism for implementing dialectical theories; 4) Dialectical theories, in turn, apply when different organisational units conflict and confront one another on an issue. The dialectics fail due to dysfunctional methods of conflicts resolution and power inequalities that limit or inhibit confrontations among opposing parties.

Given the preceding discussion, each of the four perspectives highlights a particular set of managerial challenges in managing a complex organisational change. Yet, the incompleteness of each perspective may be resolved by adopting other perspectives. This review of alternative theories enables us to think beyond a single change model (e.g., the dominant model of planned change; Cummings and Worley, 2008) and to propose a contingency model of organisational change. Moreover, the four basic perspectives can also be used as standards to evaluate the completeness and tightness of specific developmental theories. For instance, in an empirical research conducted



by Meissonier and Houze (2010), they developed the “IT conflict-resistance theory” which helps the practitioners to anticipate and resolve latent conflicts that are directly or indirectly related to the IS change during the preliminary phase of the project. Their theory particularly holds during this phase when networks of organisational actors and units emerge to introduce competing alternative approaches or designs that involve different suggestions for the change project. Yet, their theory may fail during the implementation or post-implementation phase when a particular party has won the political campaign and becomes legitimated. In this case, the life cycle theories may best explain the diffusion in the IS change process.

If it was argued that multiple models are needed to address complexities of having multiple changes ongoing in an organisation, then which models should be chosen and how they can be put together? The answers for these questions will be the focus of Section 2.4. Nevertheless, it is important next to review the literature on the resistance phenomenon in the IS field to identify emerging trends and themes which will provide my clarification for how my research can contribute to the IS field.

### **2.3. Critical review of managing resistance to IS change**

This review aims to identify and evaluate a wide range of concepts and theories associated with resistance towards IS change, identify emerging trends and themes which will provide suggestions for how future research can contribute to this field as well as investigate managerial actions or practical guidance provided by previous research. With these purposes in mind, the following strategy to conduct the literature search was used. First of all, the phrase “resistance” AND (“information systems” OR “information technology” OR “enterprise systems”) was combined to search (in the abstract before reading the full-text) for peer-reviewed articles in three academic databases (i.e., EBSCO, Science Direct, and PsycINFO), which are suggested by Bryman and Bell (2007) as widely used databases in the business management. From the listing of articles returned, the result was filtered based on a set of inclusion and exclusion criteria as the followings: 1) Because this study mainly focuses on the human aspects rather than technical errors, articles associated with

technical errors (e.g., technical system design) were excluded; 2) Some IS are tailored for individual use (e.g., consumer information systems) while others are targeted toward businesses and organisations needs and use. Therefore, studying resistance associated with consumers' use of IS is different from organisational use in terms of the theories, concepts, and perspectives. For that reason, the scope of this review only focused on B2B (business-to-business) rather than B2C (business-to-consumer) use of a system; 3) In order to ensure that the review is up to date and does not yield a vast amount of literature, the scope focused particularly on examining recent articles published from 2002 to present (over the past ten years). However, as a good practice suggested that literature scoping should include the breadth and depth of evidence covered in a given field (Davis et al., 2009), keeping an open mind toward previous research beyond this time-frame was maintained during the review process. Particularly, previous reviews on this topic can be found, for instance, in Lapointe and Rivard (2005) (from 1980 to 2005); Laumer (2011) (no time-frame and no separation between B2B and B2C use of a system); Rizzuto and Reeves (2007) (from 1984 to 2004). Since this section is not intended to present all papers dealing with resistance to IS change (or as a scientometric review) but a comprehensive overview of different understandings of this phenomenon, earlier studies on this topic which go beyond the scope of the review were also considered for any significant contribution as in Section 2.3.2. The resulting review is presented in the following sections.

### **2.3.1. The concept of resistance to IS change**

Since the core concept of this review is the resistance to IS change, it is necessary to investigate existing definitions of this phenomenon and its underlying constructs. Based on the findings of the review, I only identified six of thirty five relevant articles which explicitly defined the concept of resistance in the IS context. Because these definitions were borrowed from various reference disciplines (e.g., economics, psychology, and sociology), I subsequently aimed to search for commonalities among the definitions. A set of repeatable primitives was based on the five basic elements of resistance to implement a new IS suggested by Lapointe and Rivard (2005), which are well-known and acknowledged by other researchers (e.g., Kim and

Kankanhalli, 2009; Meissonier and Houze, 2010). While these common primitives were taken from the pool of definitions from previous relevant research, it must be noted that not all definitions found in the resistance to IS change literature have all primitives (see Table 2.2). Each of the primitives will be discussed as below.

*Manifestations of resistance:* Although resistance is viewed as a multi-dimensional construct involving how users behave in response to IS change (behavioural dimension) and what they think about the change (cognitive dimension) as well as how they feel about the change (affective dimension), behaviour is the primary dimension of resistance and resistance to IS change is generally defined as a set of behaviours enacted by users to manifest some discontent with the implementation of a new IS (Rivard and Lapointe, 2012). For instance, Joshi (2005) stated that resistance to IS change occurs when users experience the distress of inequity or loss of equity and they are likely to resist it by attempting to minimise their inputs and others' outcomes as well as attempting to increase others' input. In another definition provided by Klaus and Blanton (2010), resistance is defined as the behavioural expression of a user's opposition to a system implementation. In general, the selected definitions in the present review suggests a variety of manifestations of resistance which range from sabotage (Joshi, 2005), denial or persistence of former behaviour (Kim and Kankanhalli, 2009), to combination of several resistance behaviours (Lapointe and Rivard, 2005). While some manifestations of resistance are seen to be weak, others are strong with or without destructive behaviours.

*The subject of resistance:* refers to the actor or actors who exhibit resistance behaviours (Rivard and Lapointe, 2012). In some definitions, the subject is an individual (Joshi, 2005; Kim and Kankanhalli, 2009; Klaus and Blanton, 2010). In other definitions, the subject may also be a group (Lapointe and Rivard, 2005; Meissonier and Houze, 2010).

*The object of resistance:* is explained as the target of the resistance (Rivard and Lapointe, 2012). Based on the selected definitions, the object of resistance is mainly associated with the information system itself and its features (e.g., Kim and Kankanhalli, 2009; Klaus and Blanton, 2010), with few exceptions in which the change advocates (Lapointe and Rivard, 2005) or the conflicts associated with the system implementation (Meissonier and Houze, 2010) are also seen to be the object

of resistance because the system becomes a pawn in the interest struggle between the users and the change advocates (Lapointe and Rivard, 2005) or between groups (Meissonier and Houze, 2010).

*Perceived threat:* Most definitions share the idea that for resistance to occur, the subject of resistance has to perceive some threat. In this sense, resistance behaviour can be seen as a reaction to a present or on-going situation brought by the change which is perceived as being negative, inequitable, or as a stressful feeling or a threat (Meissonier and Houze, 2010). For instance, it was revealed that users resist the implementation of a new system when they perceive inequity (Joshi, 2005); groups resist it when they fear a potential loss of interests (Meissonier and Houze, 2010).

*Initial conditions:* include both internal (e.g., ability to gain control of a new situation) and external conditions (e.g., the characteristics of the environment) that interact with the object of resistance and influence the assessment that users make of the situation (Rivard and Lapointe, 2012). This element plays an important role to explain why some individuals or groups may accept a change, but others may resist it (Lapointe and Rivard, 2005). Although all selected definitions do not provide information about this element, it was discussed in most of the selected studies (e.g., Lapointe and Rivard, 2005; Kim and Kankanhalli, 2009; Rivard and Lapointe, 2012). For instance, in a study conducted by Joshi (2005), although he did not mention about this element in his definition of resistance to IS change, this element was discussed and referred to initial inputs (e.g., users' effort) and outcomes (e.g., work environment) that already exist. Similarly, Kim and Kankanhalli (2009) also provided discussions about this element and considered it as users' self-efficacy for change (internal initial conditions) and organisational support for change (external initial conditions). According to them, if users have a high level of self-efficacy, they will then be less likely to experience anxiety and uncertainty regarding the change. Instead, the users may feel confident in performing the focal behaviour (e.g., adapting and learning to use the new IS). Meanwhile, external conditions in the form of organisational support for change (e.g., training or providing relevant resources) can serve the same purpose to make the users' adaptation to a new IS easier.

**Table 2.2: Five basic primitives of resistance to IS change**

| Author(s)                  | Definition  | Primitives  |                           |                                     |   |                    |
|----------------------------|---|---|---------------------------|-------------------------------------|---|--------------------|
|                            |   | Manifestations of resistance  | The subject of resistance | The object of resistance            | Perceived threat                        | Initial conditions |
| Joshi (2005)               | Users who experience the distress of inequity or loss of equity are likely to resist the implementation of a new system by attempting to minimise their inputs and others' outcomes as well as attempting to increase others' inputs.   | Attempting to minimise self-inputs and others' outcomes as well as attempting to increase others' inputs.   | Users                     | The implementation of a new system. | Distress of inequity or loss of equity. | N/A                |
| Lapointe and Rivard (2005) | Resistance to IT is conceptualised as a unit-level phenomenon emerging from individual behaviours and will result in several resistance behaviours (i.e., apathy, passive resistance, active resistance, and aggressive resistance) when the consequences of its use are threatening. | Several resistance behaviour including apathy (e.g., inaction, lack of interest), passive resistance (e.g., delay, persistence of former behaviour), active resistance (e.g., voicing opposite points of view), aggressive resistance (e.g., infighting, making strikes). | Unit, Individuals         | The system and system advocates.    | The consequences of using the system.   | N/A                |
| Kim and Kankanhalli (2009) | User resistance in the IS context is conceptualised as an adverse reaction or the opposition of users to perceived change related to a new IS implementation.   | An adverse reaction   | Users                     | A new IS implementation.            | N/A                                     | N/A                |

|                             |   |  |                              |  |   |     |
|-----------------------------|---|--|------------------------------|--|---|-----|
| Meissonier and Houze (2010) | Resistance is considered as an actual behaviour preceded by conflicts associated with the system implementation, and conflict is defined as a disagreement of persons or groups of persons perceiving a situation as being inconsistent with their own interests. | An actual behaviour preceded by conflicts. | Persons or groups of persons | Conflicts associated with the system implementation. | A situation which is inconsistent with own interests. | N/A |
| Klaus and Blanton (2010)    | Resistance is defined as the behavioural expression of users' opposition to a system implementation.  | Behavioural expression.                    | Users                        | A system implementation.                             | N/A   | N/A |
| Rivard and Lapointe (2012)  | Similar to Lapointe and Rivard (2005)   |  |                              |  |   |     |

*Note:* N/A = not available in the definition

*Source:* Based on Lapointe and Rivard, 2005, p. 465.

In summary, although previous researchers provided various explanations of resistance to IS change, their definitions all contain the five basic elements above and these elements are not isolated. In particular, resistance behaviours (at both individual and group level) should follow perceived threat resulting from the interaction between the object of resistance and initial conditions. Based on the result of the interaction, different resistance behaviours (i.e., apathy, active resistance, passive resistance, aggressive resistance) will then occur. Moreover, whereas many definitions show that resistance to IS change is mainly a behavioural phenomenon (e.g., actual behaviour or behavioural expression), it is clearly the case that resistance to IS change can also be expressed in both emotional (e.g., apathy or aggressive resistance) and cognitive dimension (e.g., passive resistance such as negative thoughts about the IS change). In consistence with the tri-component model of attitudes (see for details; Rosenberg and Hovland, 1960), it may thus be argued that resistance can be seen as the negative attitude toward an IS change such as the “attitude that opposes the implementation plan” (Klaus and Blanton, 2010: 627). Besides that, the Table 2.2 also provides useful information for further investigation of the dynamics of this phenomenon. As shown in the table, the phenomenon can be studied at two levels including both the individual and the unit (e.g., dyad, group, function, or organisation) and, as a result, taking account of this concern will help to improve our understanding of the resistance phenomenon.

By adopting a multilevel perspective and seeing resistance as the negative attitude toward an IS change, resistance in this study can be conceptualised as *the collective negative attitudes of the organisation’s members toward an IS change when the goals for the system implementation cannot be unified among its members due to the multi-faceted issues brought by the change*. Since an organisational change is not the single individual that is the focus, the consideration for the collective attitudes shifts the focus to the collective of cooperating members and how they work together. In addition, by incorporating the teleological perspective into this definition, it emphasises the importance for considering three levels of analysis for studying resistance to IS change in this study: the individual (e.g., the misfit between the individual’s goals or expectations and the realities), the group (e.g., goal conflicts among groups), and the organisation (e.g., the misfit between the organisation’s

goals for implementing a new IS and its mission and strategy). Given this definition, the manifestation of resistance can be seen as the behavioural dimension of the collective negative attitudes of the organisation's members toward an IS change. Likewise, the subject of resistance refers to the organisation's members (i.e., individuals, groups, or an organisation as a whole). The object of resistance, in turn, is associated with the system implementation. Perceived threat for resistance to occur mainly involves the goals for the system implementation that cannot be unified among the organisation's members. Finally, change in initial conditions is reflected by the multi-faceted issues brought by the change.

In line with a multilevel perspective, it is also acknowledged the possibility that the resulting model for managing this phenomenon will be cross-level, recognising that there may be the interplay among each level leading to resistance to an IS change. Given that, the following sections will briefly discuss the key research which go beyond the scope of the review but are still influential and have shaped this multilevel theoretical argument.

### **2.3.2. Early research on resistance to IS change**

Early thoughts on resistance can be traced back to the work of Lewin (1947) who suggested that social systems, like biological systems, have a tendency to maintain a status quo by resisting change and reverting back to the original state. Since his work, IS researchers have drawn much attention to this phenomenon that frequently results in system implementation failures. Prior to 1980s, IS researchers were primarily interested in this phenomenon for designing systems for effective use and organisational performance (e.g., Micheal, 1964; Simon, 1965). During this period, theoretical perspectives that dominated IS studies can be divided into two groups: systems rationalism and segmented institutionalism. According to Kling (1980), systems rationalists place efficiency, whether economic or organisational, as the predominant value. In contrast, segmented institutionalists examine the consequences of systems on many aspects of social life and assume that social conflicts are particularly powerful because the social world of technological use becomes more dynamic and a wider variety of groups is involved. For instance, Whisler's (1970)



comparative studies of the impacts of computing on organisational activity in the life insurance industry was a milestone for the systems rationalist approach. He claimed that insurance firms centralised their administrative offices when they automated and the locus for making decisions moved upward in the organisational hierarchy. Managers became more robust after automation while clerical jobs diminished in scope, variety, and autonomy. In other words, the number of interpersonal contacts at the lower levels would decrease, leading to a “quiet-organisation” (p. 138). Major resistance, as he argued, should be expected in the process of converting relatively autonomous and un-programmed middle-management jobs to highly routinised programs. Meanwhile, Hoos (1960) is a pioneer researcher in the social problems that could result from widespread automation. Her study of 19 private organisations in the San Francisco Bay Area that had introduced electronic data processing was well known as a critic of systems rationalist approach which often disregards social factors (e.g., jobs lost; the trend against the need for decentralisation; personnel work devalued and so forth). From her point of view, “there is reason to believe that...it will be a social and not an economic matter as to whether they [the systems] should be performed by man at all...[Hence] a realistic and balanced view and understanding of the effects of automation provide a meaningful basis for applying thought and action to important problems faced by management, labour, and the public at large.” (p. 112).

In overall, the painted picture of IS research prior to the 1980s reflected the two distinct perspectives on causes of resistance (i.e., economic productivity versus social concern) and their varieties both survived and continuously influenced the current IS research (e.g., Klaus and Blanton, 2010; Joshi, 2005). Nevertheless, the article marking the shift into the 1980s is *The Organisational Validity of Management Information Systems* written by Markus and Robey (1980). Schultz and Slevin (1975) are credited with coining the term “organisational validity” in an effort to conceptualise the successful implementation of applied mathematical models in operations research and the management sciences. Based on their work, Markus and Robey (1980) argued that organisational validity can be easily extended to include Management Information Systems (MIS) or any technological change in complex organisations. With reference to the work of Schultz and Slevin (1975) and Ginzberg (1980), they defined organisational validity as “the result when the degree of change

in individuals, small groups, and organisational variables required to implement a model or a system” and this concept represents “a fit or match between a system and its organisational context” (p. 3). In this sense, they argued that the fit between the system and users’ motivation or cognitive styles (user-system fit) is only one of four ways in which a system can match its context of use. The others, as they argued, include the structural dimensions of the organisation (organisation structure-system fit), the distribution of power in the organisation (power distribution-system fit), and the interface between the organisation and its environment (environment-system fit). Central to this point of view is the notion that “evaluation at these levels may yield different assessments of organisational validity” (p. 5). Hence, the conditions at these level which foster the organisational invalidity of IS are considered as “resistance to information systems” (p. 29).

As the first researchers who applied the concept of organisational validity, the work of Markus and Robey (1980) departed from the prevailing wisdom in three ways. First, they viewed organisational validity not as a unitary concept but as a quality which can be assessed on at least four levels of analysis. Hence, a system that can be considered valid at one level of analysis may not be valid at other levels. Second, they viewed validity to be a property neither of systems nor of organisations, but of the match or fit between them. This implies that validity could not be assessed in absolute terms, but only relatively by comparing a specific system with its concrete context of use. More specifically, the same system may be valid (on any or all levels) in one context but invalid in another. Finally, they argued that there is no simple connection between validity and the effective system use. Instead, according to them, the success of the outcome would clearly depend, at least in part, on how effective and successful are the thinking and behaviour patterns which the system matches or does not. Thus, while they pointed out ways in which the organisational validity of a system can be increased by taking into account of four levels of analysis, they also acknowledged that there would be no simple prescriptions about the wisdom of doing so.

Although their argument shifted the focus of IS research (from the people or the system) into the need for considering the interaction between the organisation and the system being implemented, they concluded that the nature of “fit” needs to be

spelled out more satisfactorily, unless future IS researchers are seduced by a deceptively simple concept. Furthermore, while they illustrated their framework with examples, they kept their discussion at a conceptual level. Later, Markus (1983) only used data from a case study to empirically support the relevance of the power distribution-system fit (see Section 2.4.2 for more details). Based on the work of Markus and Robey (1980), other researchers (e.g., Ellen et al., 1991; Henderson and Venkatraman, 1999) also focused on one or some, but not all, dimensions of organisational invalidity as the major problems for implementing a technological innovation.

### **2.3.3. Contemporary research on reasons of resistance to IS change**

The extensive review of IT-related journals over the past ten years found thirty five articles that treated resistance as a key implementation issue. While the importance of resistance was acknowledged, most articles treated it as a black box. Particularly, five articles did not provide any reason leading to resistance but focused on when resistance occurs (e.g., its manifestations) rather than how and why it occurs (i.e., Chen et al., 2008; Ferneley and Sobreperez, 2006; Rivard and Lapointe, 2012; Selander and Henfridsson, 2012; Vann, 2004). Two articles considered it as an independent construct and investigated its association with other constructs (e.g., the demographics of individuals) (i.e., Davis and Songer, 2009; Sanford and Oh, 2010). Because most attributes associated with individual differences (e.g., age, gender) cannot be changed, they therefore will not be considered as variables in the present study but as one of the study limitations (see Section 6.6). Twenty eight articles paid attention to the causes of resistance (as shown in Table 2.3) but only nine articles (in bold) opened the black box by proposing theoretical approaches to explain how and why this phenomenon happens.

The review also indicated that previous research in resistance to IS has been diverse in terms of the theoretical perspectives used to study this phenomenon. As illustrated in the Table 2.3, it is shown that whereas some studies focused on investigating how and why resistance to IS occurs from political perspectives (e.g., Hong and Kim, 2002; Lapointe and Rivard, 2005), others examined it from economic perspectives

(e.g., Joshi, 2005; Kim, 2011) or from psychological perspectives (e.g., Kim and Kankanhalli, 2009; Klaus and Blanton, 2010). Due to the diversity of such theoretical perspectives, the reasons or causes of resistance, which have been extensively debated in the literature, are also many and varied. According to the Table 2.3, the explanations for the resistance toward a given technology can be a simple change in the nature of the task which leads to the resistance (Klaus and Blanton, 2010). Explanations can also be complex such as conflicts associated with the system implementation (Meissonier and Houze, 2010).

**Table 2.3: Summary of theoretical approaches and reasons of resistance to IS change**

| <b>Categories</b>            | <b>Reasons of Resistance</b>                                  | <b>Key theories/ models used *</b>   | <b>Author(s)</b>  |
|------------------------------|---|--|---|
| <b>Human Issues</b>          | Perceived threat of losing status and/or power                | Political variant of the interaction theory; IT conflict-resistance theory | Burchell (2011); Lowe and McIntosh (2007); Shang and Su (2004); <b>Hong and Kim (2002); Lapointe and Rivard (2005); Meissonier and Houze (2010)</b> |
|                              | Perceived loss of equity                                      | Equity implementation model; Status quo bias theory                        | <b>Joshi (2005); Kim (2011); Kim and Kankanhalli (2009)</b>   |
|                              | Colleagues' unfavourable opinion toward the IS-related change | Status quo bias theory; Theory of planned behaviour                        | <b>Kim and Kankanhalli (2009)</b>   |
|                              | Lack of self-efficacy   |  |   |
| <b>Systems Issues</b>        | Perceived threat of losing control over work procedure        | Status quo bias theory; Dual-factor theory; Technology acceptance model    | <b>Kim (2011); Beaudry and Pinsonneault (2005); Burchell (2011); Bhattacharjee and Hikmet (2007)</b>  |
|                              | Complexity due to an inappropriate system design              | Equity implementation model; IT conflict-resistance theory                 | Krotov (2011); <b>Lapointe and Rivard (2005); Meissonier and Houze (2010)</b>   |
| <b>Organisational Issues</b> | Lack of organisational commitment (e.g., resource and effort) | Organisational readiness for change theory                                 | Enns et al. (2003); Erdogan et al. (2008); Burchell (2011); <b>Kwahk and Kim (2008); Lai and Mahapatra (2004)</b>                                   |

|                       |  |  |  |
|-----------------------|--|--|--|
|                       | Lack of organisational support (e.g., poor communication, inappropriate training, lack of incentives for change) | Psychological contract theory                              | O'Sullivan (2007); Sutanto et al. (2008); Nanji et al. (2009); <b>Klaus and Blanton (2010)</b> ; Erdogan et al. (2008); Abdolvand et al. (2008); Adams et al. (2004); Benamati and Lederer (2010); Gupta et al. (2007); Lorenzi and Riley (2003); Adria and Rose (2004); Doolin (2004) |
| <b>Process Issues</b> | Job or job skills requirements change  | Equity implementation model; Psychological contract theory | <b>Joshi (2005)</b> ; Wagner and Newell (2007); Nanji et al. (2009); <b>Klaus and Blanton (2010)</b>   |
|                       | Requirements for additional workload   |  |  |

*Notes:* \* Key theories/models used are mainly based on the nine articles (in bold)

(Presented by the author)

In order to synthesise the complexity of reasons of resistance, the author classified them based on the taxonomy proposed by Klaus and Blanton (2010) which is useful in this regard. According to them, the reasons of resistance to IS can be grouped into four general categories including: individual issues, system issues, organisational issues, and process issues. At this point, it is important to clarify that by adopting this classification, the reasons of resistance internal to users as individuals or groups can be put into the “individual issues” category. Therefore, in order to avoid any misunderstanding and reflect the multilevel nature of resistance, I decided to replace its name with a new one that is “human issues”. Moreover, because there are some studies which can be grouped into more than one category (e.g., Kwahk and Kim, 2008; Meissonier and Houze, 2010; Klaus and Blanton, 2010), the author thus decided to discuss only studies which are seen to be significant regarding the issue involved.

### 2.3.3.1. Human issues

Based on the Table 2.3, there are four key reasons (i.e., perceived threat of losing status and/or power, perceived loss of equity including switching costs and switching benefits, colleagues’ unfavourable opinion toward the IS-related change, and lack of

self-efficacy) that best fit under this category because they all are psychological variables influencing how users, as individuals or groups, respond to and their ability to cope with change.

One of the most frequently found reasons for resistance in the IS literature is the perceived threat of losing status and/or power (e.g., Burchell, 2011; Lowe and McIntosh, 2007; Shang and Su, 2004). Concerning the loss of power and status, Hong and Kim (2002) argued that because the system implementation often brings with it conflicting views (e.g., type of deployment, resource allocations), “political perspective [or dialectical perspective] appears to be primary applicable for cross-functional information systems” (p. 14). They applied the political variant of the interaction theory proposed by Markus (1983) in which it was argued that an organisation is fundamentally a political entity and the implementation of a new IS usually embodies political struggles or an imbalance distribution of intra-organisational power. Consistent with Markus’s theory, the results from their field survey of 34 organisations showed that resistance has significantly negative association with the organisational Enterprise Resource Planning (ERP) implementation success and the reasons of resistance are frequently due to different power and resource allocations brought by the change.

Using the same theoretical lens, Lapointe and Rivard (2005) also found that the system implementation challenges the distribution of power among staff members across three cases in the hospital settings, leading to different resistance behaviours (i.e., apathy, passive resistance, active resistance, and aggressive resistance). Yet, the significant contribution of their study is also on the investigation of how resistance to IS change emerges and evolves during prior project stages from a multilevel perspective. In particular, it was also found that group resistance behaviours emerge from individual behaviours is not the same in early versus late implementation stage. In early implementation, group resistance behaviours emerge from independent individual behaviours. In later stages of implementation, if the inequity distribution of power has become relevant, group resistance behaviours emerge from a convergence of individual behaviours.

Since the loss of power or status can also be seen as a form of conflict among groups, Meissonier and Houze (2010) proposed an integrative approach articulating

resistance and conflict related to IT implementation instead of considering resistance and conflict as separated concepts. Based on the political variant of the interaction theory, the main considerations of their “IT conflict-resistance theory” can be summarised as: 1) Act of resistance indicates the way conflicts are expressed. In this sense, resistance is a behavioural dimension whereas conflicts are indicative of attitudinal beliefs toward IT to be implemented; 2) Conflict types related to IT are not exclusive and can overlap; 3) Users may resist IT implementation by expressing only one part of the related conflicts; and 4) One challenge for managers is adopting conflict management styles enabling identity of non-expressed parts of the conflicts. Using this theory as a theoretical basis, the results from their case study at a broadcasting corporation revealed that conflicts about the systems (e.g., lack of user friendliness) expressed by employees actually hide socio-political conflicts (e.g., loss of power) between the administrative employees and the computer department employees. As a consequence, the bottleneck should be the socio-political conflicts because it was considered that “resolving the identified system issues as not being an automatically sufficient condition for the [IS] project completion” (p. 551).

Although it was found that power is an important issue in IS implementation, it is not always an issue in resistance to IS change. The reason is that power is a factor of resistance on the group or organisational level and, thus, “the political variant [of the interaction theory] may be more relevant to understanding the implementation of integrated operational information systems, whereas some other perspective, such as one based on concepts of organisational learning, may apply better to single-user decision support systems” (Markus, 1983: 443). In other words, focusing on this issue does not leave room for explaining resistance at the individual level. For instance, in an IS change, the added efficiency brought by the system may also cause employees to fear that it would eliminate their jobs (Beaudry and Pinsonneault, 2005); make their jobs more difficult (Wagner and Newell, 2007); or result in higher quotas or expectations from management (Burchell, 2011). Collectively, individuals resist a system change mainly due to parochial self-interest (or the fear of a loss of something of value) rather than just the inequity distribution of power.

In this regard, a significant study conducted by Joshi (2005) provides a useful insight into the explanation of resistance at the individual level, especially for the causes of

resistance involving the perceived loss of equity. According to him, individuals attempt to evaluate most changes and changes that are considered unfavourable are likely to be resisted. Based on the equity theory developed by Adams (1963), Joshi (1991) developed the equity implementation model which contends that “in any exchange relationship, individuals are constantly concerned about their inputs, outcomes, and the fairness of exchange” (p. 231). According to this model, a user’s analysis of a system change might be carried out at three levels. At the first level, a user would evaluate the potential impact of the implementation of a new system in terms of the resulting change in his or her outcomes and inputs. The changed outcomes are defined as the perceived benefits or losses that the implementation of a system brings about for the user. Similarly, changes in inputs can be either negative (e.g., additional efforts, skills, or abilities that a user may need to bring to the job) or positive (e.g., less physical labour). At the second level, a user is likely to compare the change in his or her relative outcomes with that of the employer. In other words, a user is likely to evaluate whether the gains have been shared between the employer and him/herself in proportion to each one’s respective deservingness. If the user feels that the employer has obtained greater relative gains as compared to him/herself, the user is likely to become distressed and view the change as unfavourable. At the third level of analysis, a user is likely to compare his/her relative outcomes with that of other users in the reference group or the organisation. If the user feels other users benefited more than him/her, the user will assess the change as unfavourable. In general, his model assumes that “users’ assessment of changes in their own and others’ inputs and outcomes” (p. 234). In other words, it assumes that human beings behave rationally (e.g., cost-benefit analysis) and in their own best interest.

In an effort to test the equity implementation model in the IS environment, Joshi (2005) found that employees, at the first level, tend to resist the new order management system because it requires additional inputs in the form of learning and understanding new technology and bringing higher level skills to the job. At the second level of analysis, employees realise that there is likely to be an increase in productivity and profit due to the implementation of a new system. However, their salary scales are not upgraded and the perceived threat of losing benefits as compared to the employer is seen to be the main reason of resistance at this level. Finally, whereas the new system appears to have nearly the same impact for other



employees within the same department, the asymmetry in the benefits between employees across departments is a possible source of distress of inequity.

The perceived loss of equity as the main cause of resistance was also addressed and tested in a study conducted Kim (2011). Although he considered Joshi's equity implementation model as a useful framework, he also argued that another appropriate theoretical approach that can be used for explaining the perceived loss of equity is the status quo bias theory, especially its rational decision making construct. Adopting both the status quo bias theory proposed by Samuelson and Zeckhauser (1988) (see below for details of the status quo bias theory) and the equity implementation model developed by Joshi (1991), Kim (2011) argued that users often assess the relative costs and benefits of change (i.e., net benefits) prior to switching and the status quo bias results when the relative costs outweigh the relative benefits. Through a survey of 201 employees across 7 business units, he found that uncertainty costs (e.g., perception of risk surrounding the performance of a new IS) and sunk costs (e.g., investment of time and emotional effort which already incurred in the old system) directly increase user resistance, while transition costs (e.g., spending associated with a procedural change) and loss costs (e.g., benefits and privileges lost by switching to a new IS) indirectly increase user resistance by reducing the perceived value of switching.

Although previous research has indicated that the equity implementation model can be used to explain the dynamics of employee resistance to IS change, it must be noted that this theory also has shortcomings. Particularly in the real world, "users may also lack awareness of some outcomes and inputs" and, thus, "once a system is installed it should be possible for users to make a better assessment" (Joshi, 1991: 240). Given this, the model seems to have a shortcoming for investigating the reasons of resistance at the pre-implementation phase due to, for instance, employees' lack of information about the new system (Kim and Kankanhalli, 2009). Furthermore, the theory is based on an assumption that human beings behave rationally. However, humans often behave irrationally (Markus, 1983) and thus not all people behave in the manner prescribed by the equity theory.

Given the preceding discussion, Kim and Kankanhalli (2009) argued that despite the fact that the reasons for resistance to IS in organisational contexts have been

somewhat explored, there are still gaps in the explanation of how users evaluate the change related to a new IS and decide to resist it. First, individuals hardly make their decisions without considering their colleagues' opinion and such opinion has been considered as a salient social influence that individuals subscribe to in their work environment. Thus, colleagues' unfavourable opinion toward the IS-related change may cause users to reform their perceptions about an IS change, leading to increase their resistance. Second, self-efficacy for change (or confidence in one's own ability to adapt to the new situation) may also influence user resistance indirectly through its effect on switching costs (e.g., time and effort to learn how to use the system). Individuals with lack of self-efficacy (or low level of self-efficacy), therefore, feel discouraged and may be more inclined to resist the change. Specifically, as they argued, missing in the explanation of users' decision making is the concept of status quo bias which assumes the reasons of resistance are due to the bias or preference to stay with the current situation. Adopting the status quo bias theory proposed by Samuelson and Zeckhauser (1988), Kim and Kankanhalli (2009) described status quo bias explanations in terms of three main categories including rational decision making, cognitive misperception of loss aversion, and psychological commitment. According to them, rational decision making implies an assessment of relative costs and benefits of change before switching to a new alternative. Greater costs than benefits will lead to status quo bias. The cognitive misperception of loss aversion implies that losses loom larger than gains in value perception. Loss aversion can result in status quo bias because even small losses of changing the current situation could be perceived as larger than they actually are. Finally, the psychological commitment consists of sunk costs (e.g., investment of time and emotional effort which already incurred in the old system), social norms (e.g., colleagues' opinion), and control (e.g., effort to feel in control or self-efficacy) (see for details; Samuelson and Zeckhauser, 1988; Kim and Kankanhalli, 2009). Nevertheless, instead of using the status quo bias theory to explain the resistance to IS change, they showed the correspondences between the elements in the status quo bias theory and the set of constructs in the Theory of Planned Behaviour (TPB) developed by Ajzen (1985), which then was used as their theoretical basis. In brief, Ajzen (1985) stated that the focal factor that explains an individual's behaviour (e.g., resistance behaviour) is behavioural intention and behavioural intention is formed by three factors: (1) the individual's attitude toward the target behaviour; (2) subjective norm which reflects

the influence (e.g., social pressure) of significant other referents' desire for the individual to perform or not perform the behaviour; and (3) the individual's perception of the resources and opportunities available to him/her (see for details; Ajzen, 1991).

Based on the results from a field survey of 202 employees across 10 business units in an IT service company, Kim and Kankanhalli (2009) found that the key reason of users' resistance prior to a new IS implementation is switching costs which increase their resistance both directly and indirectly through their perceived value. Furthermore, they also found that both colleagues' opinion and self-efficacy negatively relate to switching costs. It means that colleagues' unfavourable opinion toward change and/or lack of self-efficacy will increase user resistance through the effect of increase in switching costs.

Whereas both studies conducted by Kim and Kankanhalli (2009) and Kim (2011) advance our theoretical understanding of resistance to IS change through the introduction of status quo bias theory, they both have the same limitation. Particularly, while it is assumed that loss aversion is one of the reasons for status quo bias as well as resistance (Kim and Kankanhalli, 2009); this principle was not actually tested in both studies. Instead, it was tested via other constructs such as perceived value (Kim and Kankanhalli, 2009) or loss costs (Kim, 2011). Hence, as Kim and Kankanhalli (2009) suggested, future work may attempt to empirically validate this principle in user resistance.

### **2.3.3.2. System issues**

Perceived threat of losing control over work procedure and complexity due to an inappropriate system design are two key reasons associated with "system issues" because they are primarily related to system usage.

From a learning perspective, individuals who are accustomed to specific systems will develop habits and find it hard to change those habits. Thus, another cause of resistance can be seen as perceived threat of losing control over work procedure such as control over job-related tasks (Kim, 2011) or control over the technology and its usage (Beaudry and Pinsonneault, 2005) because, as Burchell (2011) argued, the IS

change will “devalue tried-and-true practices or years of personal investment and commitment to proven ways of doing things” (p. 21). The notion of perceived threat of losing control over work procedure was reiterated in a study conducted by Bhattacharjee and Hikmet (2007). However, they argued that though it appears that resistance precedes system usage, it is unclear whether this association is direct or mediated by other constructs. To explore the relationship between resistance and usage, they drew upon Cenfetelli’s (2004) dual-factor model in which IS usage by potential end-users is depended on simultaneous consideration of enabling and inhibiting factors. While enabling factors, such as users’ perceived usefulness and ease of use of the system - which are two key determinants of individuals’ attitude toward a technology as illustrated in the Technology Acceptance Model (TAM) developed by Davis (1989) - have been extensively studied in the usage literature (e.g., Venkatesh et al., 2003; Venkatesh and Bala, 2008), they argued that there has been little if any consideration of inhibiting factors. Using the Partial Least Squares (PLS) technique which is distribution-free and does not impose sample size restrictions, their results from a field survey of 131 practicing physicians in a hospital setting confirmed that physician resistance to change is caused by the perceived threat of losing control over work procedure. Particularly, physicians viewed the new system as a tool that would make them lose control over their work in the way they made clinical decisions, ordered patient tests, accessed lab results, and worked in general.

Closely related to the above, Krotov (2011) found the complexity due to an inappropriate system design (e.g., the technical and functional inadequacy of the system) as another cause of resistance, leading to the system implementation failure at his case study. Lapointe and Rivard (2005) also found that early in the system implementation, the object of resistance is the system’s complexity. Based on the equity implementation model, they found that the system’s complexity threatened the physicians’ economic well-being because they were paid by procedure and the system’s complexity required them to spend more time for managing their patients’ records. From the “IT conflict-resistance theory” lens, Meissonier and Houze (2010: 543) argued that the conflicts about the system can be associated with the “perceived ease of use” dimension of the system (e.g., the system is complicated to use) and thus affect the attitudes of individuals toward it. In fact, the results from their case study

showed that one of the main roots of IS resistance is the conflicts about the IS design, its functionalities, and efficacy. Particularly, whereas administrative employees asked for the implementation of an ERP system to ensure a more coherent and efficient management of daily tasks, the computer department employees were opposed to this ERP system solution. The reasons of resistance to the new system included such as not easy-to-use application, lack of user friendliness, non-appropriateness to user needs, bugs, programming quality standards not ensured, potential incompatibilities with other applications.

Given the preceding discussion, while a system change is generally seen as a positive change (e.g., making reduction in process time or cost savings), it also may cause a fear of loss of related knowledge on the old system (Bhattacharjee and Hikmet, 2007) or the loss in productivity due to the system complexity (Meissonier and Houze, 2010). In order to prevent such loss of user control over job-related tasks, individuals may need to adjust personal habits to fit the requirements of the technology (Beaudry and Pinsonneault, 2005) or acquire new skills and knowledge required in order to perform their tasks (Kim, 2011).

#### **2.3.3.3. Organisational issues**

Lack of organisational commitment and support (i.e., poor communication, inappropriate training, and lack of incentives for change) were all put into the category of “organisational issues” because they revolve around organisational aspects leading to employees’ resistance to IS change.

According to Enns et al. (2003), the emphasis placed on an IS change project is to build the top management’s commitment to allocate attention and resources to the project. Indeed, as they pointed out:

“A critical part of the chief information officer’s (CIO’s) strategic role [or the change agents’ role] is to provide thought leadership to other top executives, making them aware of the potential for information system to support and enhance the strategy of the firm... Without which [the commitment of the top management team] the project would stand a lesser chance of success” (p. 156).

Lack of organisational commitment as a main source of resistance was also underlined in a research conducted by Erdogan et al. (2008) in which employees, who are pushed to comply with the IS change rather than to commit to it, express their resistance in a hidden rage which, as they argued, may create more problems in the future. In other words, forcing the organisation's members to change when their readiness levels are low may have unfavourable effects such as their resistance to change (Burchell, 2011).

In consistence with this point of view, Kwahk and Kim (2008) put it:

“Readiness is the cognitive precursor to the behaviours of either resistance to or support for a change effort. Readiness for change is reflected in the attitude toward organisational change of organisational members. It refers to the extent to which organisational members hold positive views about the need for organisational change, as well as the extent to which they believe that such changes are likely to have positive implications for themselves and the organisation... Thus, readiness for change would reduce resistance among employees to an IT-driven organisational change” (p. 80).

By outlining the readiness for change as a way to understand why the resistance phenomenon occurs, Kwahk and Kim (2008) also argued that adopting or resisting a specific system is not solely dependent on the characteristics of the system (e.g., performance expectancy and effort expectancy) or employees' tendency and characteristics (e.g., perceived personal competence), but also on other aspects such as organisational commitment. According to them, organisational commitment means “the relative strength of an employee's identification with and involvement in a particular organisation” (p. 80). Hence, they proposed that a highly committed employee may more readily identify with and accept organisational change efforts than their non-committed colleagues. The results from a field survey of 446 employees in 7 selected companies confirmed that organisational commitment significantly influences readiness for an IS change and, as a consequence, reduces employees' resistance to an IS change. Whereas Lai and Mahapatra (2004) also found that organisational commitment is important to minimise resistance to change, they further emphasised “a shared commitment to the project throughout the organisation” (p. 2363). According to them, in order to build “a shared

commitment”, the core of IS planning therefore must support organisational goals and activities at every level by assessing the external IS environment and its internal requirements. Concurrently, a shared commitment can also be built by facilitating well-designed training programmes, effective communication systems, and fair bargaining procedures.

Closely related to the above issue, lack of organisational support in terms of poor communication, inappropriate training, and lack of incentives for change is another key issue at the organisational level. When considering the challenges for implementing a knowledge management system, O'Sullivan (2007) argued that the biggest impediment to the new system implementation success is a lack of understanding of the rationale for change and this impediment can be seen as a result of poor communication. Sutanto et al. (2008) also posited the inter-organisational communication as the core issue in their study of three public transport organisations implementing the fare card system because the top management could only initiate energy to change in their respective organisations, but could not sustain such energy. Similarly, Nanji et al. (2009) found in their empirical research that one main factor causing staff resistance to bar code scanning system implementation is associated with communication issues. Particularly, they found that staff resisted the system change because they believed that the new system involved a lot more work when it in fact would make their work a lot easier. As they noted, “clear communication around workload expectations during the implementation process may mitigate much of these misunderstandings and the resulting staff resistance” (p. 647).

Beside the issue of poor communication causing employees uncertainty about the benefits of the system and the rationale of the change, inappropriate training is also found as an organisational issue and “can be problematic when employees perceive training to be a waste of time, that trainers are incompetent, the timing of training is inappropriate, or if there is a lack of training” (Klaus and Blanton, 2010: 632). Erdogan et al.'s (2008) findings from semi-structured interviews with top level managers in eight companies, covering different industries (i.e., consultancy, contracting, architecture, and technology), also showed that insufficient training is one cause of resistance that made the system implementation less successful. In this regard, the role that inadequate training can play in exacerbating staff resistance to an

IS change is well recognised (e.g., Abdolvand et al., 2008; Adams et al., 2004; Benamati and Lederer, 2010; Gupta et al., 2007; Lorenzi and Riley, 2003). For instance, whereas inadequate training is one reason leading employees to feel uncomfortable with their new working environment, designing and implementing training programs (e.g., seminars or workshops) can be helpful in diminishing their resistance (Abdolvand et al., 2008). Lorenzi and Riley (2003) further put it:

“Because technology investments are largely made up of things (i.e. hardware and software), it is easy to make the mistake of believing that a technology is implemented once it has been bought and installed. In fact, nothing works without people. These human issues become magnified in the process of redesigning work processes. Many work process redesign projects focus exclusively on technology and fail to address the human and organisational aspects of work. In these instances, organisations fail to explore non-technical solutions to improve organisation processes such as training or changes in structures, procedures, and management practices” (p. 202).

Moreover, lack of incentives for change or lack of adequate compensation might also constrain staff commitment toward an IS change (Adria and Rose, 2004), particularly if users do not feel compensated for the workload change (Klaus and Blanton, 2010). A research conducted by Doolin (2004) within the hospital setting further illustrated the case in which the new system implementation is perceived by the clinical staff as a change implemented by a financial need to maximise cost recovery rather than by clinical correctness. As a result, lack of incentives for change leads the staff to perceive the new system as a threat to the autonomy of their medical professionals.

Among these studies, Klaus and Blanton (2010) argued that organisational issues such as lack of organisational support for an IS change can be explained by the psychological contract theory. Adopting the work of Rousseau (1995), Klaus and Blanton (2010) explained the psychological contract as “beliefs that individuals hold regarding promises made, accepted, and relied on between themselves and another” (p. 626). Using three-phase multi-method qualitative approach to collect data from three organisations, they found that lack of communication (e.g., not conveying to users the benefits of the system and the “whys” of the change), problematic training (e.g., training not accompanying new job requirements), and lack of incentives for



change (e.g., inappropriate compensation for the workload change) are the key organisational issues leading to the breach of employees' psychological contracts and their resistance to the IS change.

#### **2.3.3.4. Process issues**

Job/job skills change and requirements for additional workload were placed into the "process issues" category because they all are problems faced by users resulting from the changed processes synonymous with IS implementation. For instance, whereas users' distress of inequity or loss of equity is the main reason leading to IS resistance, Joshi (2005) found that possible sources of distress of inequity are due to the job/job skills change and the requirements for additional workload. Consistent with the above, Wagner and Newell (2007) found that employees often look at what the new system offers and be concerned about whether it makes their job easier or more difficult. According to them, if the new system is seen to make their job difficult, there will be significant user resistance. Likewise, a research conducted by Nanji et al. (2009) indicated that changing roles is also an important cause of resistance among staff as some have entirely different job descriptions with the new system.

In line with the equity implementation model, Klaus and Blanton (2010) also found that job/job skills change and requirements for additional workload are two of the main reasons of resistance although they applied the psychological contract theory as a lens to understand users' resistance. According to Klaus and Blanton (2010), an IS change often requires that users' job descriptions are revised or that users perform different job tasks or develop new skills and new ways of thinking for the job. Meanwhile, the change also causes users to exert additional effort to perform the same task. Therefore, these two issues are likely to be considered as "a psychological contract breach" (p. 632). In this case, as they explained, the "equity comparison" is considered as "a moderator of perceived unmet promises on perceived breach of contract" (p. 633). Given that, their model is similar to the equity theory and limited in explaining irrational resistance behaviours (e.g., loss aversion).

### **2.3.3.5. Summary and implications for future research**

While the research of the past decade tends to portray resistance as the normal reaction to IS change, it is clearly the case that it is a complex phenomenon which cannot be explained in a simple causal fashion. Specifically, through the review of various theoretical approaches and the findings of reasons of resistance resulting from these theoretical approaches, it can be seen that there are many different issues that need to be taken into account when managing IS resistance (i.e., personal tendency and perceptions, group associations within the organisation, functionality of the system, and so forth). The importance of each issue is very much dependent on the situation, such as “the equity situation” (Joshi, 2005: 7) or “the conflict situation” (Meissonier and Houze, 2010: 549). Thus, “no tactics [for managing resistance] are useful in every situation” (Markus, 1983: 441). However, although previous research on resistance to IS change is characterised as more divergent than convergent, the present review does figure out some suggestions for future investigations of this phenomenon. In particular, one implication is that it is the interaction of various threats that produce a particular instance of resistance and resistance is not a simple adoption or rejection of a proposed IS change. There are the employees’ attitudes which shape their views of change and degree of adoption or rejection. Examining their attitudes to understand the causes of resistance requires the change actors to pay attention not only to explicit behaviours but also to the change recipients’ thinkings and feelings by considering the potential impact of the IS change on them. As Bhattacharjee and Hikmet (2007: 729) put it, “rarely do individuals form resistant attitudes, or express such attitudes in acts or dissent or protest, without considering the potential negative consequences for themselves”.

Moreover, resistance to an IS change should not be seen as counter-productive. In other words, resistance may create barriers for not implementing an undesirable IS change, or at least forcing the change actors to re-think about the change. For instance, in a research conducted by Meissonier and Houze (2010), it is clearly the case that the computer department employees supported a system change, but not the one which was proposed due to its inappropriate design. Thus, resistance should be considered as a valuable source of feedback for improving the process and conduct of IS change rather than seeing it as a barrier or obstacle to overcome.

Another implication is that the investigation of this phenomenon can be conducted at different levels of analysis (i.e., individual, unit and organisational level). In this regard, the review (see Table 2.3) provides different theoretical approaches for investigating the resistance phenomenon. For instance, in order to investigate this phenomenon at the individual level, the equity implementation model or the psychological contract theory may best help to identify the “rational” causes of resistance; whereas the status quo bias theory may be used to explain both the “rational” and “irrational” aspects. At the group level, the political variant of the interaction theory or its related theory (e.g., the IT conflict-resistance theory) may best serve to diagnose the causes of resistance among groups by shifting the focus to “the intra-organisational power and politics” (Markus, 1983: 442). Meanwhile, the readiness for change theory and the psychological contract theory can be seen as appropriate theoretical approaches for understanding the issues around organisational aspects leading to employees’ resistance to IS change.

Nevertheless, while resistance by its nature is a “multilevel” phenomenon (Lapointe and Rivard, 2005: 467), what previous researchers want is to turn it into a private decision, with the exception of the political variant of the interaction theory which is based on the “interaction between organisation and system” (Markus, 1983: 441). For instance, Kwahk and Kim (2008: 80) posited that “if people hold a positive attitude toward change and are ready for change, they are not likely to resist change”. In the meantime, Klaus and Blanton (2010: 627) assumed that “a user experiencing a [psychological contract] violation would likely have strong negative perceptions towards the ES [Enterprise Systems] and the change”. Thus, previous researchers tend to link the organisational issues to individual reasons for resistance and, therefore, aiming at the individual level of analysis. Given this, investigating resistance to IS change at the organisational level requires the need for caution since it differs from investigating resistance at the individual level or the group/unit level (see Section 2.4.1 for more discussions).

### **2.3.4. Strategies for managing resistance to IS change**

In response to the reasons of resistance to IS change, previous researchers (e.g., Adams et al., 2004; Shang and Su, 2004; Benamati and Lederer, 2010) have proposed a variety of strategies to overcome or reduce resistance to IS change. Using a change management style model suggested by Shang and Su (2004), the strategies identified from the literature over past ten years were organised into four different management styles including directive, participative, consultative, and coercive as in Table 2.4. Each of management styles will be discussed as below.

#### **2.3.4.1. Directive management style**

This management style refers to the use of managerial authority to effect the change (Shang and Su, 2004). One of the most frequently recommended strategic option in this category is to provide employees with proper training (e.g., Adams et al., 2004; Beaudry and Pinsonneault 2005; Benamati and Lederer, 2010). For instance, according to Kim (2011), organisational support in the form of training could reduce users' switching costs of time and effort required to learn the new way of working. Similarly, Gupta et al. (2007) suggested that training can be used not only to increase employees' confidence on using the system but also to enhance the system utilisation and users' commitment toward the system change. However, as Adams et al. (2004: 58) put it, "there is a danger of training users too early and then finding that the users have forgotten much of what they learned and/or are not as familiar with the product [or the system] when the actual implementation occurs". Additionally, it is not always the case that employees have time for the training sessions because they need to use that time for the project they are currently working on (Erdogan et al., 2008). Therefore, providing training can be time consuming, expensive but will not guarantee the IS implementation success unless the timing of the training is considered carefully (Adams et al., 2004).

Given the disadvantages of training, other researchers suggested that managers should document standards so that new procedures are easy to learn, resulting in reducing learning effort and frustrations (Joshi, 2005); or simply clarify job definition (e.g., job or task reallocation) before the changeover to reduce switching

costs (e.g., uncertainties) (Kim, 2011); change the work schedule to avoid the workload (Nanji et al., 2009; Rivard and Lapointe, 2012), and pace conversion to allow for reasonable readjustment period in order to deal with the system's complexity (Lapointe and Rivard, 2005). Another way to deal with resistance is to give employees higher wage rates in return for a work rule change (Joshi, 2005; Klaus and Blanton, 2010); alter their job titles to reflect their increased responsibility (Lorenzi and Riley, 2003); or give someone who employees respect a key role in the implementation of a change to create peer influence (Lorenzi and Riley, 2003; Kim and Kankanhalli, 2009). Nevertheless, such strategic options also have their drawbacks when implementing. In particular, while the former set of strategic options will slow down the change process (Leon, 2008); the latter one will lead to interest and/or power conflicts if it is not considered carefully (Meissonier and Houze, 2010).

#### **2.3.4.2. Participative management style**

Managers adopting this style tend to create widespread participation by employees on direction and process of change (Shang and Su, 2004). The first identified strategic option in this category is to get employees involved in the development of a new system (e.g., Adams et al., 2004; Kwahk and Kim, 2008). According to Adams et al. (2004), getting employees' involvement helps them develop not only realistic expectations about the system capabilities, but also a sense of ownership which commits them to the new system. Erdogan et al. (2008) further added that getting employees' involvement is critical because it helps insure accurate requirement specifications and foster a sense of empowerment and ownership by providing employees with opportunities to influence decisions regarding the system. Similarly, Joshi (2005) argued that if the IS change is made on an arbitrary basis without employees' involvement, employees will perceive greater inequity as compared to the introduction of the same change with proper involvement process. Yet, this strategic option also has its own disadvantage. Kotter and Schlesinger (2008) figured out that getting employees' participation or involvement can be very time consuming if participators suggest or design an inappropriate system change, leading to delays in the system design phase.

The second identified strategic option in this category is to open lines of communication between employees and management (e.g., Hong and Kim, 2002; Nanji et al., 2009; Klaus and Blanton, 2010). According to Abdolvand et al. (2008), managers should provide employees with channels of communication to improve the ability of understanding each other and provide them with the required information. From a different point of view, Meissonier and Houze (2010) suggested that frequent communication is an ideal way to investigate and solve implicit socio-political conflicts (e.g., loss of status and/or power) between different groups of employees. Communication also helps employees see the need for and the logic of the IS change (Klaus and Blanton, 2010). However, despite the fact that communication is seen to be useful, Kotter and Schlesinger (2008) argued that implementing this strategy requires a good relationship between managers and employees or that the latter may not believe what they hear.

#### **2.3.4.3. Consultative management style**

Managers adopting this style tend to provide employees with needed information and support (Shang and Su, 2004). According to Enns et al. (2003), consultation tactic such as conducting orientation sessions to prepare for the IS change is an effective way to achieve a shared vision of the new IS's role in the organisation. Lowe and McIntosh (2007) further explained that the introduction of a new system often require employees to put to one side their existing knowledge and/or practice of the old system and replace them abruptly with best practices brought by the new system. As a consequence, they suggested that conducting sessions among managers and employees prior to the IS change is vital to show the evidence as to what best practices these are and how applicable they are to the organisation.

Whereas conducting orientation sessions to prepare for the IS change is obvious, the results of it will help managers decide more specific future actions or strategies to be applied such as providing job counselling and organising group therapy to help employees adjust (e.g., Adams et al., 2004; Klaus and Blanton, 2010; Benamati and Lederer, 2010), upgrading work environment following change (e.g., Joshi, 2005; Kim and Kankanhalli, 2009), or redesigning the system when the object of resistance is system features (e.g., Erdogan et al., 2008; Kwahk and Kim, 2008; Rivard and

Lapointe, 2012). Last but not least, Shang and Su (2004) suggested that managers should also be receptive to employees' ideas and/or complaints, following conversation to maintain employee contact and trust. According to them, this is useful when the employees hold misconceptions about the new system implementations or they do not have sufficient information of the benefits and gains.

Nevertheless, although the strategic options associated with the consultative management style have been proved to be effective by previous researchers (e.g., Benamati and Lederer, 2010; Rivard and Lapointe, 2012), Kotter and Schlesinger (2008) argued that they can be very time consuming and expensive, especially if lots of employees are involved.

#### **2.3.4.4. Coercive management style**

Managers adopting this style aim to force employees to stop resisting the new system by using their coercive power (Shang and Su, 2004). For instance, Rivard and Lapointe (2012) stated that it is possible for managers to implicitly and/or explicitly threaten resisters with loss of job or promotion possibilities. Although this approach is favourable when the speed of the IS implementation is a crucial factor (Kotter and Schlesinger, 2008), it can be risky and should be used only when managers have high credibility (Rivard and Lapointe, 2012). Specifically, as Rivard and Lapointe (2012: 915) noted:

“When credibility is low, users will assess the situation as more threatening than before the implementers' response, and this is likely to have a multiplicative effect on the level of perceived threats. Hence, resistance will increase”.

#### **2.3.4.5. Summary**

In summary, there are various approaches and associated strategic options which can be adopted by managers for dealing with employees' resistance to an IS change (see Table 2.4). Specifically, the directive approach mainly focuses on guiding the use of the new system and reducing the employees' perceived loss of equity in their

perceived outcomes. Within this approach, appropriate training for the operation of the new system is the most mentioned strategic option for dealing with resistance. Whereas the directive approach is seen as the top-down approach applicable to rule-based organisations in a controlled environment, the participative approach (or the bottom-up approach) aims for involving employees in the change process, for instance, to encourage their feelings of ownership or to improve the ability of understanding each other and their socio-political conflicts. Meanwhile, the consultative approach requires our attention on the morale aspects of the employees to enhance their perceived value by providing them with needed information and support. Thus, it is useful in helping the employees to adjust to change. Finally, the coercive approach, which is not limited to any cause of resistance, can be seen as a double sword strategy. On one hand, it is the less time-consuming strategy for quickly managing the resistance phenomenon. On another hand, it can increase the employees' resistance if managers do not have high credibility. In concluding the review of strategies for managing resistance to IS change, it is emphasised that there is no one single approach for managing all causes of resistance and each approach has its own merits and drawbacks. Hence, managers should take into account various considerations (e.g., time and budget constraints, the degree of involvement of employees) before making the choice of strategies. Otherwise, the IS implementation failure resulting from inconsistent strategies is predictable.

**Table 2.4: Summary of different management styles and strategies to manage IS resistance**

| <b>Management style</b> | <b>Strategic option(s)</b>   | <b>Cause(s) of resistance</b>                    | <b>Author(s)</b>           |
|-------------------------|--|--|----------------------------|
| <b>Directive</b>        | Pace conversion to allow for reasonable readjustment period          | Complexity due to an inappropriate system design | Lapointe and Rivard (2005) |
|                         | Document standards so new procedures are easy to learn and reference | Perceived loss of equity                         | Joshi (2005); Kim (2011)   |



|                      |  |   |   |
|----------------------|--|---|---|
|                      | Train or retrain employees to be effective users of the new systems  | Lack of organisational support (e.g., inappropriate training); Lack of self-efficacy; Perceived loss of equity; Lack of organisational commitment | Lorenzi and Riley (2003); Adams et al. (2004); Lai and Mahapatra (2004); Shang and Su (2004); Joshi (2005); Beaudry and Pinsonneault (2005); Bhattacharjee and Hikmet (2007); Gupta et al. (2007); Erdogan et al. (2008); Kwahk and Kim (2008); Nanji et al. (2009); Kim and Kankanhalli (2009); Meissonier and Houze (2010); Benamati and Lederer (2010); Klaus and Blanton (2010); Kim (2011); Rivard and Lapointe (2012) |
|                      | Clarify job definition before the changeover   | Perceived loss of equity  | Kim (2011)  |
|                      | Alter job titles to reflect increased responsibility   | Lack of organisational support (e.g., lack of incentives for change)  | Lorenzi and Riley (2003)  |
|                      | Changing the work schedule   | Requirements for additional workload  | Nanji et al. (2009); Rivard and Lapointe (2012)   |
|                      | Give employees higher wage rates in return for a work rule change  | Perceived loss of equity; Lack of organisational support (e.g., lack of incentives for change); Job or job skills requirements change             | Joshi (2005); Klaus and Blanton (2010)  |
|                      | Give someone who employees respect a key role in the design or implementation of a change                        | Colleagues' unfavourable opinion toward the IS-related change   | Lorenzi and Riley (2003); Kim and Kankanhalli (2009)  |
| <b>Participative</b> | Involve employees in the development of new systems to create commitment and/or encourage a feeling of ownership | Lack of organisational commitment; Perceived loss of equity   | Adams et al. (2004); Shang and Su (2004); Joshi (2005); Wagner and Newell (2007); Kwahk and Kim (2008); Erdogan et al. (2008)   |
|                      | Open lines of communication between employees and management   | Lack of organisational support (e.g., poor communication); Perceived threat of losing status and/or power   | Hong and Kim (2002); Adams et al. (2004); Shang and Su (2004); Beaudry and Pinsonneault (2005); Lapointe and Rivard (2005); Abdolvand et al. (2008); Nanji et al. (2009); Kim and Kankanhalli (2009); Meissonier and Houze (2010); Klaus and Blanton (2010)   |

|                     |  |  |  |
|---------------------|--|--|--|
| <b>Consultative</b> | Provide job counselling and organise group therapy to help employees adjust            | Perceived loss of equity; Lack of organisational commitment; Lack of organisational support (e.g., inappropriate training) | Adams et al. (2004); Joshi (2005); Kwahk and Kim (2008); Klaus and Blanton (2010); Benamati and Lederer (2010)                 |
|                     | Conduct orientation sessions to prepare for change                                     | Lack of organisational commitment; Perceived loss of equity  | Enns et al. (2003); Bhattacharjee and Hikmet (2007); Lowe and McIntosh (2007)  |
|                     | Be receptive to complaints following conversion to maintain employee contact and trust | Lack of organisational support (e.g., poor communication); Perceived threat of losing status and/or power                  | Shang and Su (2004)  |
|                     | Upgrade work environment following change  | Perceived loss of equity   | Joshi (2005); Kim and Kankanhalli (2009)   |
|                     | Redesigning the system when the object of resistance is system features                | Perceived threat of losing control over work procedure; Complexity due to an inappropriate system design                   | Erdogan et al. (2008); Kwahk and Kim (2008); Meissonier and Houze (2010); Klaus and Blanton (2010); Rivard and Lapointe (2012) |
| <b>Coercive</b>     | Implicitly and/or explicitly threaten loss of job and promotion possibilities          | (Not limited to any cause of resistance)   | Rivard and Lapointe (2012)   |

*Source: Based on Shang and Su (2004), p. 152.*

#### **2.4. Explanatory theories guiding the present study**

As discussed so far in this chapter, resistance to IS change is clearly a complex phenomenon. Although previous scholars have used different theories to explain this phenomenon, only few have applied different theoretical lenses to see it and none has examined it as a truly multilevel phenomenon (see Section 2.3.2 and 2.3.3).

Because it is difficult to use a unique theory that simultaneously explains all of this phenomenon's dimensions, I particularly adopt the alternate templates strategy suggested by Langley (1999) for theorising from process data. According to her, within this strategy the researchers propose "several alternative interpretations of the same events based on different but internally coherent sets of prior theoretical premises" (p. 698). Thus it is more like "alternate complementary readings that focus on different variables and levels of analysis and reveal different types of dynamics" (p. 699).

Using the alternate templates strategy, explanatory theories guiding this study are based on the criteria including: the clarity of the level of analysis of the theory, its recognition from previous scholars, and its parsimonious nature. The following sections will provide the justification for each theory in details.

#### **2.4.1. Resistance to IS change at the organisational level**

The relevant question to be asked at this level is: What explains the propensity of an organisation to resist an IS change? Investigating resistance to IS change at this level differs from investigating resistance at the individual level or the group/unit level because its theoretical foundation is not fully developed. Although knowledge in this area is under researched, previous IS researchers have long argued that a critical determinant of an IS implementation success within an organisation is the match or fit between the proposed system and the organisational elements (e.g., Dwivedi et al., 2012; Hong and Kim, 2002). In the review of the IS contingency research (see Section 2.2.4.1), previous IS researchers (e.g., Khazanchi, 2005; Stoel and Muhanna, 2009), including most notably DePietro et al. (1990) and Rogers (1995), adopting the contingency theory in the IS field has broadened the importance of “fit” or “match” between the organisation and the target technology as an attribute deemed essential for success of technological innovation. As Rogers (1995) noted:

“...most organisations continuously scan for innovations, and match a promising innovation with one of their relevant problems” (p. 393).

Yet, while the importance of fit or match between the organisation and the target technology will continue to provide a useful guidance for this study, a critical problem for assessing the “fit” remains. For instance, instead of offering details regarding which organisational factors are important when implementing a new system, DePietro et al. (1990: 153) assumed that “organisational context captures all relevant properties of the organisation that makes the adoption decision”. Meanwhile, Rogers (1995: 380) considered “internal characteristics of organisational structure” as independent variables measuring certain dimensions of an organisation. Thus, whereas DePietro et al.’s TOE framework has been described as a “generic theory” within which a host of various factors can be placed (Zhu and Kraemer,

2005: 63), Rogers' DOI theory has been criticised for its bypass of other organisational dimensions such as "business strategy" (e.g., business purpose which is not to maximise benefits but to avoid losses) (Lyytinen and Damsgaard, 2001: 183). Lundblad (2003) further added that another criticism of Rogers' work involves its over-emphasise on diffusion and adoption by individuals (e.g., diffusion as the process by which an innovation is communicated through certain channels over time among the individuals) rather than within organisations. As he argued:

"It becomes clear that Rogers' diffusion of innovation theory building and research began with, and still primarily focuses on, diffusion and adoption by individuals rather than within organisations. This provides an opportunity to more fully extend Rogers' work into the organisational setting" (p. 60).

For this reason, the theoretical framework used at this level is mainly derived from the literature on organisational development (OD) theories since previous OD theorists have developed a wide range of models that can be used to identify important organisational elements and their interrelationships. For instance, Noolan (2006) provided a comprehensive review of previous OD models as well as their strengths and weaknesses including Weisbord's Six Box Model, McKinsey 7 S Model, Galbraith's STAR Model and so forth, just to name a few. The purpose here is not for introducing and discussing these models. Instead, the focus is on deciding which model is suitable for the present study. In this regard, Burke (1992) (cited from Jones and Brazzel, 2006), suggested three criteria for selecting a model. First, it should be one that the researcher understands and feels easy to use. Second, the chosen model should match the organisation under investigation as closely as possible. Finally, it should be sufficiently comprehensive to enable data to be collected about the organisation according to the model's parameters but without missing key information.

Whereas the first and the third criterion can be based on my opinion about the chosen model and my knowledge about possible key determinants of resistance at the organisational level, the second criterion depends on my basic assumptions about my chosen organisation. From a review of different theoretical perspectives on the change management theories, my consideration is given to "open systems" approach. Specifically, although it was believed that studying resistance to IS change is more

associated with internal organisational network than external one (e.g., Bhattacharjee and Hikmet, 2007; Meissonier and Houze, 2010), the review of the change management literature (see Section 2.2.4.1) indicates that there is some impact of the external environment on an organisation. Furthermore, since the open systems perspective shows that the focus of an organisational change is neither on the individual nor on the group but on the entire organisation with the openness to its environment, Scott (2003) stated that previous perspectives which were grounded on closed system view of organisations need to be radically revised. Similarly, Martin and Terblanche (2003) added that the open systems approach is one of the best approaches to describe an organisation because it offers a holistic approach that allows the investigation of external elements.

From the open systems perspective, Jones and Brazzel (2006) suggested that there are three OD models which can be applied to take into account the impact of external environment. These models include Weisbord’s Six Box Model, Nadler-Tushman Congruence Model, and Burke-Litwin Model. The summary of these models is presented in the Table 2.5 below.

**Table 2.5: Comparison of three different open systems models**

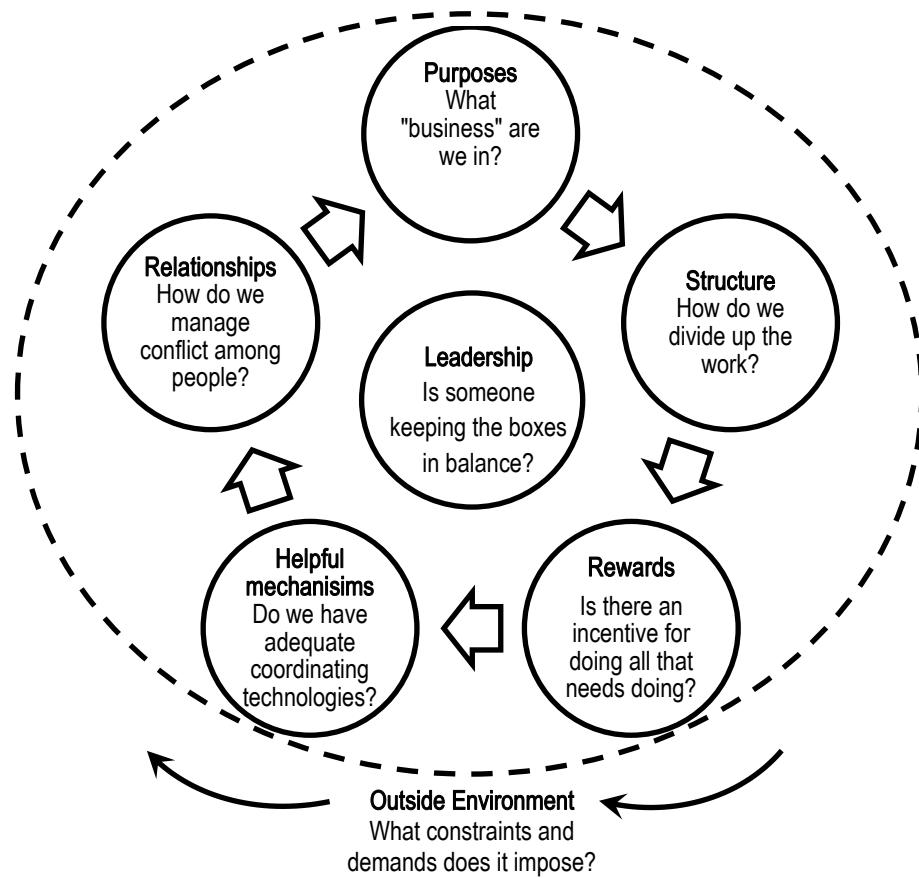
| <b>Models</b>                   | <b>When to apply</b>  | <b>Strengths</b>   | <b>Limitations</b>  | <b>Evaluation</b>  |
|---------------------------------|---|--|---|--|
| Weisbord’s Six Box Model        | <ul style="list-style-type: none"> <li>• Environment is relevant but not a significant factor</li> <li>• Simplicity and speed of diagnosis are important</li> </ul> | <ul style="list-style-type: none"> <li>• Well known</li> <li>• Easy to explain</li> <li>• Helps identify and focus priorities</li> </ul>     | <ul style="list-style-type: none"> <li>• Does not show interdependencies clearly</li> <li>• Too simplistic</li> </ul> | <ul style="list-style-type: none"> <li>• Does not distinguish between transformational and transactional diagnosis in organisational behaviour and change</li> </ul> |
| Nadler-Tushman Congruence Model | <ul style="list-style-type: none"> <li>• A comprehensive analysis is required</li> </ul>  | <ul style="list-style-type: none"> <li>• Suggests cause-effect relationships</li> <li>• Highlights both mismatches and congruence</li> </ul> | <ul style="list-style-type: none"> <li>• Too complex and difficult to understand</li> </ul>                           | <ul style="list-style-type: none"> <li>• Too complex and difficult to understand</li> <li>• Does not examine specific elements of an organisation</li> </ul>         |

|                    |  |  |   |   |
|--------------------|--|--|---|---|
| Burke-Litwin Model | <ul style="list-style-type: none"> <li>• A practical utility is required</li> <li>• Need to see how organisational performance and effectiveness are affected</li> <li>• Need to see how change can be influenced</li> <li>• A cross-cultural application is required</li> </ul> | <ul style="list-style-type: none"> <li>• Linkages are explained</li> <li>• Distinguishes between the role of transformational and transactional dynamics in organisational behaviour and change</li> <li>• Takes into account the individual and group analysis</li> </ul> | <ul style="list-style-type: none"> <li>• Too complex</li> </ul> | <ul style="list-style-type: none"> <li>• Practical usefulness in cross-cultural research setting</li> <li>• Too complex with twelve theoretical constructs</li> </ul> |
|--------------------|--|--|---|---|

*Source: Based on information from Jones and Brazzel (2006), pp. 195-202.*

When considering these three models, Nadler-Tushman Congruence Model is rejected not because of its complexity but also because it does not examine specific elements of an organisation, both in terms of formal and informal. For the Burke-Litwin Model, one of its strengths is that it takes into account the individual and group analysis to explain how they affect the organisational performance. Yet it must be noted that the purpose of the study is about resistance, not about performance or effectiveness. Moreover, when considering the upper half of the Burke-Litwin Model which displays the transformational constructs, the model is also influenced by elements of Weisbord's Six Box Model. As mentioned by Burke and Litwin (1992) (cited from Burke et al., 2009), their model actually incorporates some important concepts of previous open systems models. For the sake of parsimony (a model that provides good explanation while using the fewest constructs is preferable), Weisbord's Six Box Model (see Figure 2.1) is applied in this study.

**Figure 2.1: Weisbord’s Six Box Model**



*Source: Jones and Brazzel (2006), p. 199.*

Weisbord (1976: 431) likens his model to a “radar screen”, depicting six common problem areas in an organisation that help to give insight into why an organisation may be experiencing problems and where to begin interventions for change. The first box to be examined is the purposes or missions (e.g., is this clear and is it understood and bought into by the employees?). Next, Weisbord considers the structure as the way of how the work gets divided up, and whether it makes sense given the purpose. The rewards box examines whether all the needed tasks have incentives. However, “having a reward system (formal) in no way guarantees that people will feel and act if they are rewarded (informal)” (p. 441). Thus, as he suggested, the change actors should diagnose the similarities and differences between the organisation’s formal reward (e.g., the compensation package) and its members’ perceived rewards or

punishments. In turn, the helpful mechanisms box is aimed to examine whether the organisation has adequate coordinating technologies. Weisbord (1976: 443) refers this box to “the cement that binds an organisation together to make it more than a collection of individuals with separate needs”. Hence, this also refers to the procedures that every organisation must attend in order to survive such as planning, control, budgeting, information and communication systems used to achieve the organisation’s purposes. The relationships box refers primarily to how units within the organisation are coordinated, or not, and can give rise to conflict. Finally, the leadership box is placed in the central because Weisbord sees the role of leadership as helping to ensure that the other five boxes are in balance, and if not then to take corrective actions. In Weisbord’s model, the external environment is presented but not considered as a separate box. According to him, diagnostic analysis of an organisation, however, must take into account the influences of external environment since the six boxes are part of an environmental scope such as “the extent to which purposes and structure support high performance and ability to change with conditions” (p. 432).

#### **2.4.2. Resistance to IS change at the group level**

To investigate resistance to IS change at the group level, the question involves: Why does a group of actors engage in resistance toward an IS change? As Lapointe and Rivard (2005) stated, resistance from a single user would not be sufficient to severely affect the overall IS implementation process or lead to system abandonment, it is therefore necessary to also consider resistance at the group level. From the literature review (see Section 2.2.4.3 and 2.3.3.1), it is clearly that power struggles and conflict of interest are common sources of resistance at this level. To this end, I particularly adopted Markus’s (1983) political variant of interaction theory which assumes that an organisation is fundamentally a political entity and the implementation of a new IS usually embodies political struggles or an imbalance distribution of intra-organisational power and resources. Therefore, according to the theory, a group of actors will resist the system if they believe it might cause them to lose power or resources, and vice versa.



Whereas there are other theories or models that can be applied to examine the tensions or conflicts between groups (e.g., the paradoxical theory of change), the political variant of interaction theory is chosen for two reasons. First, it was originated in the IS field and previous IS researchers (e.g., Hong and Kim, 2002; Lapointe and Rivard, 2005) considered it as a classical theory for studying IS implementation in an organisation. Laumer and Eckhardt (2012) further added that “Markus was one of the first authors to discuss user resistance behaviour through a theoretical lens...Especially the interaction theory of user resistance during IS implementation projects has made several contributions to user resistance knowledge” (p. 72). Second, this theory does not see the tensions or conflicts between groups as uni-dimensional factors but instead as multi-dimensional ones which are formed through interaction between the system being implemented and the context of use (Laumer and Eckhardt, 2012). Therefore, its proactive process (e.g., solutions are made according to the researcher’s emerging sense of the situation or the context) seems to reflect the natural nature of the concern.

In brief, Markus (1983) argued that an implementer trying to decide what to do about resistance of individuals or organisational subunits may hold one of three divergent theories about why that resistance occurs. She called these three theories as “the people-determined theory”, “the system-determined theory” and “the interaction theory” (p. 431). In particular, according to the people-determined theory, the persons or groups may be believed to have resisted because of factors internal to the persons or groups (e.g., people with analytic cognitive styles accept the system, while intuitive thinkers resist it). In the system-determined theory, the persons or groups may be believed to have resisted because of factors inherent in the application or system being implemented (e.g., an unfriendly system). Finally in the interaction theory, the persons or groups resist the system because of an interaction between characteristics related to those persons and characteristics related to the system. Whereas the third theory is difficult to define, she argued that it is not the same as a simultaneous belief in the two previously mentioned theories in the sense that “neither the system nor the organisational setting is the cause of resistance, but their interaction” (p. 431). Hence, the interaction theory can explain different responses by the same group of users to different settings. In other words, “the interaction theory allows for more precise explanation and predictions of resistance” (p. 431-2).

Furthermore, she figured out two distinct variations of the interaction theory. The sociotechnical variant of the interaction theory focuses on the distribution of responsibility for organisational tasks across various roles and on the work-related communication and coordination around the division of labour. In this light, resistance is explained as the result of the interaction of system with the division labour (e.g., unfit between the user's tasks and the system). Meanwhile, the political variant of the interaction theory emphasises the distribution of intra-organisational power. Therefore, resistance is explained as a product of the interaction of system design features with the intra-organisational distribution of power (e.g., a redistribution of power unacceptable to those losing power). By illustrating the relevance and even superiority of the political variant of the interaction theory over other theories based on the data from her case study, Markus sheds more light on the cause of resistance at the group level by introducing the political context of a new system implementation.

#### **2.4.3. Resistance to IS change at the individual level**

At this level, the question involves: Why do individuals resist an IS change? Although there are different suggested theories for understanding resistance to IS change at the individual level (see Section 2.2.4.4 and 2.3.3.1), several attempts to answer this question seem to converge on the fact that resistance is a complex phenomenon and that individuals resist a system not only because of their rational reasons (e.g., job or job skills requirements change, requirements for additional workload) but also because of their irrational reasons (e.g., loss aversion). In order to capture both rational and irrational aspects of resistance, I particularly adopted Samuelson and Zeckhauser's (1988) status quo bias theory which describes status quo bias explanations in terms of three main categories including rational decision making, cognitive misperception of loss aversion, and psychological commitment (see Section 2.3.3.1 for details). One reason for choosing this theory to explain resistance at the individual level is that it has been recognised by some IS researchers (e.g., Dwivedi et al., 2012) and applied by others (Kim and Kankanhalli, 2009; Kim, 2011). Although the present study continues the previous efforts of Kim and Kankanhalli (2009) and Kim (2011) in examining resistance to IS change using the

status quo bias theory, it must be noted that there is a distinction between this study and the one conducted by them. Particularly, the theory of status quo bias will be used to explain the reasons for resistance directly in the present study. By doing so, it will show how each category in the status quo bias theory contributes to the explanation of resistance.

Another reason, perhaps the most important, is that all of the causes of resistance at the individual level identified in nine core articles (which provided theoretical approaches to explain how and why resistance occurs; see Section 2.3.3) can be explained in terms of the status quo bias theory as illustrated in Table 2.6. Therefore, this theory is adopted as the template to examine resistance at this level.

In an attempt to answer “how do individuals make decisions?”, Samuelson and Zeckhauser (1988) believed that individuals often tend to make their choice or select the alternative that offers the highest expected utility (e.g., net benefits). However, under uncertainty, or when individuals face with a complex decision, they argued that individuals often stick with the status quo alternative by doing nothing or maintaining their current or previous decision. Based on the results of a series of decision-making experiments designed to test for status quo effects, they found that decision makers exhibit a significant status quo bias and the explanations for the status quo bias fall into three categories. First, the effect of status quo bias can be seen as the consequence of individuals’ rational decision making. Specifically, under certainty (e.g., when the individuals have sufficient knowledge or information about their choice set), the status quo bias occurs whenever “the cost of switching [or transition costs] exceeds the efficiency gain [or net benefits] associated with a superior alternative”. Yet in real-world decision problems when the set of possible choice alternatives is often unknown (e.g., lack of information or knowledge about the choice set), “a related explanation for status quo inertia is the presence of uncertainty [or uncertainty costs] in the decision-making setting” (p. 34). In other words, uncertainty or the individuals’ perception of risk associated with their new alternative can also cause the status quo bias.

Since neither transition costs nor uncertainty is adequate to explain status quo inertia in their experimental studies, Samuelson and Zeckhauser (1988) contended that other reasons, such as Kahneman and Tversky’s (1979) loss aversion (e.g., the individual

is risk averse with respect to gains but risk seeking with respect to losses) and Thaler's (1980) endowment effect (e.g., losses loom larger than gains in value perception), could be taken by their participants to outweigh their status quo choice. Therefore, as they argued, because the individuals weight their potential losses from switching as larger than potential gains, they are loss averse and biased in favour of the status quo. However, they also argued that status quo bias is consistent with, but not solely prompted by, loss aversion. For instance, because gaining a good understanding of the pros and cons of a single choice is sometimes a lengthy and complex undertaking, the individual can hardly be expected to carry out a complete analysis of all choices. Assuming that he or she understands his or her current choice set, a reasonable strategy would be to undertake a comparative analysis including only some subset of information about that choice set or take an initial decision value as a starting point and to adjust this value to yield a final decision value. Such "cognitive misperception", as Samuelson and Zeckhauser (1988: 36) labelled, might apply to the individuals' probabilistic forecasts that lead them to a particular decision including their status quo decision.

Finally, the effect of status quo bias can be seen as the consequence of psychological commitment. One factor contributing to psychological commitment is the presence of sunk costs or other past resource investments (e.g., time and effort) which already incurred. In other words, "the greater the investment in the status quo alternative, the more strongly it will be retained" (p. 37). This factor, as they explained, can also be seen as regret avoidance. From time to time, the individuals often find themselves in the unpleasant position of regretting the outcomes of past decisions. Such lessons of experience teach the individuals to avoid, if possible, regrettable consequences. Therefore, "the individuals tend to avoid consequences in which they could appear after the fact to have made the wrong choice, even if in advance the decision appeared correct given the information available at the time" (p. 38).

Moreover, many choices are made within group and organisational settings, where individuals' interests do not fully coincide. Given the effect of social norms (e.g., colleagues' opinion), a decision maker may choose to retain a previous choice to maintain his or her reputation and decision-making authority. To reverse his or her position may suggest that he or she have made a poor choice originally. A drive for

such consistency (e.g., the individuals choose their beliefs in accordance with their colleagues to minimise cognitive dissonance) can also create psychological commitment.

A third type of psychological commitment contributing to status quo bias stems from efforts to feel in control. Making a decision imposes the individual's perception that he or she controls the situation. Thus, Samuelson and Zeckhauser (1988: 41) also claimed that "the bias stemming from the illusion of control is a significant potential source of status quo inertia".

**Table 2.6: Correspondences between previous research and status quo bias theory**

| Previous research               | Status Quo Bias Theory              |   |   |                             |  |   |   |
|---------------------------------|-------------------------------------|---|---|-----------------------------|--|---|---|
|                                 | Cognitive Misperception             | Rational Decision Making                              |   |                             | Psychological Commitment   |   |   |
|                                 | Loss Aversion                       | Net Benefits  | Transition Costs  | Uncertainty Costs           | Sunk Costs   | Social Norms  | Control   |
| Hong and Kim (2002)             |                                     |   | Loss of power and resource  |                             |  |   |   |
| Joshi (2005)                    |                                     | Net gain due to change is negative                    | Decrease in outcomes (loss of power and status), increase in inputs (more effort in learning the new system, bringing higher level skills to the job) |                             | Decrease in outcomes (loss of value of current skills and expertise) |   |   |
| Lapointe and Rivard (2005)      |                                     |   | Loss of economic well-being, status and power   |                             |  |   |   |
| Bhattacharjee and Hikmet (2007) |                                     |   | Lack of perceived usefulness (job performance)  |                             |  |   | Loss of control over work procedure                                 |
| Kwahk and Kim (2008)            |                                     | Low performance expectancy and high effort expectancy |   |                             |  |   | Lack of organisational commitment and perceived personal competence |
| Kim and Kankanhalli (2009)      | Low perceived value (loss aversion) | Low perceived value (inequity)                        | High switching costs (transition)   | High switching costs (risk) | High switching costs (time and emotional effort)                     | Colleagues' unfavourable opinion toward the IS-related change | Lack of self-efficacy and organisational support for training       |

|                             |   |   |  |   |   |  |   |
|-----------------------------|---|---|--|---|---|--|---|
| Meissonier and Houze (2010) |   |   | New professional skills required, loss of value and/or power | System complexity (i.e., not easy-to-use application, lack of user friendliness), uncertainty about the definition and the execution of tasks |   |  |   |
| Klaus and Blanton (2010)    |   |   | Inappropriate training, requirements for additional workload | Uncertainty, system complexity  | Job/job skills change   |  | Perceived lack of capability, loss of control |
| Kim (2011)                  | High loss costs (benefits and privileges lost by switching to a new IS) | Low perceived value (relative costs outweigh relative benefits) | High transition costs (increase in workload)                 | High uncertainty costs (high perceived risk surrounding the performance of a new IS)  | High sunk costs (loss of previous investment of time and effort which already incurred in the old system) |  |   |

*Source: Based on Kim and Kankanhalli (2009), p. 570.*

#### **2.4.4. Summary**

The summary of explanatory theories guiding this study is presented in Table 2.7. In the table, each theory or model is supposed to explain a distinct aspect of resistance. However, it is worth restating that each model, as shown in the table, will be applied to explain the resistance phenomenon at each level of analysis independently rather than comparing their explanatory power. In particular, Weisbord's Six Box Model will be applied to explore whether the misalignment between the IS change and the organisation's sub-systems create the resistance; and if yes then which organisational parameters need to be adjusted to achieve the alignment. Since Weisbord's Six Box Model is based on the open systems perspective, it also offers a holistic approach that allows the investigation of external elements exacerbating the resistance. Likewise, Markus's political variant of interaction theory will be used to investigate why a group of actors engage in resistance toward an IS change by examining the political context of a new system implementation. Finally, Samuelson and Zeckhauser's (1988) status quo bias theory will be applied to investigate why the organisational staff resist an IS change in terms of both rational and irrational causes of resistance. The outcomes of these investigations will then be put forward to plan appropriate management strategies for dealing with the resistance. In other words, the study in overall follows the strategic choice theory (see Section 2.2.4.2) in which I attempt to manage this phenomenon with the cooperation of the top management at the chosen organisation by listing "a set of possible paths and then rely on norms of decision rationally or action rationally to prescribe certain paths" (Van de Ven and Poole, 1995: 517).



**Table 2.7: Explanatory theories guiding the present study**

| <b>Theory/Model</b>            | <b>Status quo bias theory</b>   | <b>Markus's political variant of interaction theory</b>  | <b>Weisbord's Six Box Model</b>   |
|--------------------------------|---|--|---|
| <b>Explanation</b>             | The reason for resistance is due to the bias or preference to stay with the current situation.          | When the new system implies a loss of power or resources from a group of actors, this group will resist implementation. In other words, group resistance to change occurs in the context of political struggles. | An organisation is described as an open system which is comprised of a set of interdependent parts or sub-systems with the openness to its environment. Changes in one or more parts of the system will imply changes for the others. |
| <b>Unit of analysis</b>        | Individual  | Group  | Organisation  |
| <b>Key concepts</b>            | Rational decision making, cognitive misperception of loss aversion, and psychological commitment.       | Power, interests, tactics  | Organisational parameters (i.e., purpose, structure, rewards, helpful mechanisms, relationships, and leadership)  |
| <b>Question to be answered</b> | Why do individuals resist an IS change?   | Why does a group of actors engage in resistance toward an IS change?   | What explains the propensity of an organisation to resist an IS change?   |
| <b>General propositions</b>    | Individual resistance behaviours can only be explained in terms of both rational and irrational causes. | When the group of actors is facing conflict of interests, the system will be resisted.   | An IS change will require to change other components/sub-systems within an organisation to achieve the alignment. Misalignment between the IS change and the organisation's sub-systems will create the resistance.                   |

*(Presented by the author)*

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1. Introduction**

According to Bryman and Bell (2007), business research does not exist in a vacuum. There are a variety of considerations that require a researcher's attention when proceeding into the process of doing a business research. These considerations, as Bryman and Bell (2007) explained, are shaped not only by the researcher's beliefs of what is going on in the real world but also by many of the intellectual traditions (e.g., quantitative versus qualitative research) that shape the social science at large. Given that, these considerations will provide the central focus of this chapter. In particular, this chapter will first discuss the research philosophy which involves the epistemological and ontological considerations and how they will form the basis for this study. This is followed by a discussion of why a "hybrid approach" adopting ideas and concepts from action research and case study methodologies will be chosen as the appropriate research strategy for achieving the research aim and objectives outlined in Chapter 1. Next, the research design and quality criteria for this study will be discussed so that the demand for rigour to meet the academic standards can be fulfilled. Finally, due to the close relationship between the researcher and participants within the AlphaBank, the ethical procedures to ensure an acceptable standard of ethical practice will be put forward.

### **3.2. Research philosophy**

When conducting a research, there are several major questions that require significant consideration by the researchers such as "Why research?" and "What to research?" but central to the researchers' answers are their perspectives on "How to research?". According to Creswell (2008), it is important to recognise that there is no single or accepted way for the "how" of doing a research. Indeed, the answers for it depend upon a range of factors including: the researchers' beliefs about the nature of reality (ontology), how knowledge of this reality can be obtained (epistemology), the

purposes and goals of the research, the characteristics of the research participants, the audience for the research, the researchers' personal experience, and the position and environment of the researchers themselves (Ritchie and Lewis, 2008). Therefore, being aware of how differences in the mix of these factors, especially the philosophical starting point (i.e., ontological and epistemological assumptions) which affects the methodological developments (e.g., how to research) not only secures the quality of the research produced but also the degree to which its findings are accepted by the target audience.

In terms of ontological considerations, Bryman and Bell (2007) pointed out that the central point of debate is the question of whether social entities that have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors. They continued by outlining two main opposing ontological positions, which they referred to as objectivism and constructivism. According to them, objectivism portrays the position that social phenomena confront us as external facts that are beyond our reach or influence. Meanwhile, constructivism asserts that social phenomena and their meanings do not exist within a vacuum but are created from the perceptions and consequent actions of social actors, and many constructions of reality are therefore possible. In this study, I take a constructivist ontology and believe that the experience of change process and reasons for resistance typically varies for different people because the change process is usually fluid and dynamic. This point of view is in line with other researchers (e.g., Becker and Niehaves, 2007; Ford et al., 2002) who argued that all participants in a change process do not encounter the same initiative within the same context. Indeed, as Ford et al. (2002: 106) explained:

“Resistance as a response to a change initiative...is a product of the background conversations that constitute the constructed reality in which participants live, rather than existing as some ‘true’ realities found in an individual or their external conditions”.

Since resistance to change is a function of the constructed reality, participants in different constructed realities have different senses of themselves which lead to different actions and different forms of resistance. As Ford and his colleagues put it,

“it is the nature of this reality that gives resistance its particular form, mood, and flavour” (p. 106).

Closely coupled with ontology and its considerations of what constitutes reality, epistemology considers views about the most appropriate ways for obtaining the knowledge of such reality (Easterby-Smith et al., 2008). A particularly central issue in this regard is the question of whether or not the social world can and should be studied according to the same principles, procedures, and ethos as the natural sciences (Blaikie, 2007; Bryman and Bell, 2007). One extreme of the epistemological continuum is positivism which takes a philosophical stance of the natural scientists and asserts that the subject of analysis should be measured by objective methods rather than subjective ones (Easterby-Smith et al., 2008). In other words, positivist researchers believed that “only observable phenomena can provide credible data or facts” and the researchers should “focus on causality and law-like generations” (Saunders et al., 2009: 119). The reason why the positivist researchers can be objective in their approach and the investigation can be viewed as value-free is due to their objectivist assumptions about the reality in which “the world is independent of and unaffected by the researcher” (Ritchie and Lewis, 2008: 16).

Another end of the epistemological continuum is interpretivism which asserts that the subject matter of the social sciences is fundamentally different from that of the natural sciences and the study of the social world therefore requires a different logic of research procedures (Bryman and Bell, 2007). Particularly, in the social world people are always affected by the process of being studied and the research cannot be undertaken in a value-free way (Ritchie and Lewis, 2008). Moreover, because the social world is far too complex to lend itself to theorising by definite laws in the same way as the natural sciences, generalisability is not of crucial importance. In fact, interpretivist researchers argued that a rich understanding of the subject matter is more valuable than the generalisation of the research (Saunders et al., 2009). That is to say, “those researchers critical of positivism argue that rich insights into this complex world are lost if such complexity is reduced entirely to a series of law-like generalisations” (p. 114).

When considering epistemological assumptions, I believe that an interpretivist perspective is highly appropriate for studying organisational behaviour in such fields

as resistance to IS change. As discussed previously, because this phenomenon is a socially constructed reality, it can only be understood from the point of view of the participants who are directly involved in the IS change process. Furthermore, because different participants have different senses about the IS change, it is necessary to understand the subjective meanings motivating their resistant attitude rather than develop law-like generalisations. According to Kroeze (2012), in practice this means there are multiple versions of reality and it is required to have more than one interpretation of such reality which is constructed, complex and multidimensional. This, as he called, is “the principle of multiple interpretations” (e.g., more than one interpretation is possible and acceptable) in the interpretivist epistemology (p. 4).

Taking both ontological and epistemological assumptions into account, the underlying philosophical stance of this study is the interpretive paradigm of socially constructed realities, which is based on the view that there are multiple realities to be understood and that it is necessary to understand the subjective meanings motivating people’s actions in order to be able to make sense of their motives in a way that is meaningful (Hatch and Cunliffe, 2006; Blaikie, 2007).

Although the philosophical position is mainly influenced by one’s particular view of the relationship between knowledge and the process by which it is developed, researchers (e.g., Bryman and Bell, 2007; Saunders et al., 2009) argued that the adopted philosophy is likely to be in part influenced by the goals of the research and the researchers should not neglect the importance and significance of them to maintain the coherence throughout the research. As the goals of this study aimed to gain deep insights into organisational IS change process and resistance to change and the research questions were generated in “How” and “Why” formats, the study is similar to previous phenomenological studies (e.g., Nanji et al., 2009; Klaus and Blanton, 2010) in which human experiences and social realities are involved through detailed descriptions of the phenomena under review. In other words, the positivist position which focuses on causality and law-like generations is seen to be not appropriate for the goals of the study because the rich insights into the subject matter will be lost.

### **3.3. Research approach**

Despite the fact that the interconnections between the philosophical position and research approach are not straightforward as they are sometimes presented, researchers (e.g., Blaikie, 2007; Creswell, 2008) stated that an interpretivist position usually calls for a qualitative approach in which findings are obtained through non-numerical or statistical techniques and the purpose is to reach an in-depth understanding about social realities and patterns create them. In this study, qualitative approach is considered and justified to be more appropriate than quantitative approach for several reasons. In particular, it was argued that the qualitative approach is highly appropriate in studying process because depicting process requires detailed description rather than credible data or facts and the experience of process normally varies for different people (Patton, 2002). Furthermore, this approach can allow the researchers to gain insights into organisational change, understand its complex process, discover the reasons for resistance, and identify the influence of the external context. In other words, it can better deal with the difficulties and information associated with organisational changes to give the researchers a holistic picture about the phenomena of interest (Cassell and Symon, 2004).

By contrast, a quantitative approach does not enable the researchers to obtain unexpected information and explore unanticipated avenues (Blumberg et al., 2005) and therefore is inappropriate if the study deals with social processes (Patton, 2002). For instance, Ritchie and Lewis (2008) argued that even as a quantitative study can offer a brief solution to understand participants' experience via open-ended questions, a one or two sentence response from a questionnaire will not provide deep insights as to the real perceptual experience of the informants. They further added that the quantitative approach would create a static view of participants that is independent of their experience because the quantitative approach usually omits the process of interpretation or definition that goes on in their lives. Bryman and Bell (2007: 174) also ended with the same view about the ecological validity of the quantitative research by arguing that:

“How do we know if survey respondents have the requisite knowledge to answer a question or if they are similar in their sense of the topic being

important to them in their everyday lives?...One can go even further and ask how well their answers relate to their everyday lives. People may answer a question designed to measure [for instance] their motivation to work, but respondents' actual behaviour may be at variance with their answers".

Given the issue of the ecological validity, adopting the quantitative approach in this study could lead to the case in which the motives behind participants' resistant attitudes and responses (e.g., why and how resistance to IS change takes place at the IS pre-implementation phase) might be ignored and the author would not know how the findings connect to everyday contexts.

While most studies adopted the qualitative approach is often based on an inductive reasoning in which the researchers infer the implications of their findings for the theory (Ritchie and Lewis, 2008), it must be noted that this study is based on an abductive reasoning which incorporates both induction and deduction (see for details; Blaikie, 2007) because one of the study's purposes was to evaluate the set of change management strategies proposed. Similar to an inductive reasoning, the researchers adopting an abductive reasoning also aim to draw on the concepts and meanings used by social actors and their actions to produce social scientific accounts of social life. However, the difference is that once the phase of theoretical reflection on a set of data has been carried out, the researchers continue collecting further data in order to establish the conditions in which the theory will and will not hold (Blaikie, 2007). An example of an abductive reasoning is Glaser and Strauss' (1997) grounded theory method, which they developed to enable generation of theory from data in an emergent but rigorous fashion and enhanced the transferability or analytical generalisability of the theory through the means of identifying analogous situations where the theory might be expected to hold.

Although an abductive research aims for the discovery of an emergent theory rather than testing or replicating an existing theory, Blaikie (2007: 90) made it quite clear that "existing social theories or perspectives" are required to enable a theory to emerge. The extent theories, academic literature and knowledge of the subject in general take an important role to sensitise the researchers to areas of possible interest and the development of analytical concepts. Moreover, such theoretical perspectives can subsequently provide both additional support for the emergent theory and a

backdrop for evaluating the contribution of the research. Given that, the process of inquiry in this study was informed by defined theoretical lenses and prior research, and the emergent theory would be developed through analytical induction and supplemented by a process of feedback with participants.

### **3.4. Research strategy**

Generally, there are three traditional research strategies for real world social research that include experiment, survey, and case study (Bryman and Bell, 2007). Because the research strategy, as the logics of social enquiry, influences the research design and the way in which the researchers collect data (Creswell, 2008), each of these research strategies have been carefully evaluated before the conclusion on the suitable research strategy is made. When considering the research strategy, it was realised that experiment is usually used to measure the effects of manipulation, where the investigator can manipulate the independent variable to examine its effects on the dependent variable (Sekaran, 2003). However, there are many independent variables with which I was concerned that could not be controlled for. As one of the objectives of this study was to investigate different reasons for resistance to IS change process in real scenarios, it would be difficult to control the variables at the strategic level of the organisation (e.g., allocation of resources among functional areas). Second, survey research could lead to the problem of reliability if it relies on a few respondents. Compared to survey and experiment, although the bias and lack of rigour of the case study strategy are frequent critics, this strategy is seen to be appropriate in this study because: 1) “Why” and “How” questions were proposed and these deal with organisational change process to be traced over time rather than with frequency or incidence as in a survey; 2) The investigator has little control over the event; 3) The focus is on a contemporary phenomenon (e.g., resistance to change) within a real-life context and the boundaries between the phenomenon and context are not clearly evident (Yin, 2009: 9). The fact that case study strategy has been used in varied investigations, particularly in the IS field, is another reason for adopting it in this study (Orlikowski and Baroudi, 1991; Walsham, 1995).

At this point, it is important to note that the research questions of this study do not only involve “Why” and “How” but also “How to” questions (e.g., how to manage



resistance to IS change) because it is believed that studying a real world problem without assisting to resolve or ameliorate it will be perceived as unhelpful. In order to answer such question, I also pay my attention to an action research (AR) strategy, which is based on an interventionist method and pioneered by Lewin (1946). According to Lewin, AR can be seen as “a comparative research on the conditions and effects of various forms of social action” (p. 35). In other words, the generation of knowledge in AR needs to be combined with changing the social system through the researcher’s acting on or in it. He made a clear picture of the term “action research” by emphasising some key characteristics of this approach to social enquiry such as an orientation to social change action, a focus on problem solving, a spiral and iterative process of steps each of which is composed of a circle of planning, action, and fact-finding about the result of the action. While other action researchers agreed on these characteristics of AR, researchers (e.g., Chein et al., 1948; Susman and Evered, 1978) argued that AR projects are likely to vary in the numbers of phases which are carried out in collaboration between the researcher and the participants. For instance, Susman and Evered (1978) suggested a cyclical process of five phases including diagnosing, action planning, action taking, evaluating, and specifying learning. Meanwhile, McKay and Marshall (2001) suggested a dual cycle process of AR to make it different with a consultancy work and enhance the necessity of its dual objectives of both practical and theoretical contribution.

The reason why AR strategy was not mentioned at the beginning of this section is that some researchers (e.g., Atkins and Sampson, 2002; Benbasat et al., 1987; Blichfeldt and Andersen, 2006) placed AR as a subclass of case study strategy. For instance, Blichfeldt and Andersen (2006) pointed out that both case study and AR are concerned with the researchers’ gaining an in-depth understanding of specific phenomena in real-life settings. Consequently, many action researchers (e.g., Cunningham, 1993; Cavaye, 2008) embraced the particular procedures for doing research which the proponents of case study research offer.

Although I agree that the reasons to make case study research feasible are correspondingly true for AR, it is necessary to highlight differences between these two as in the Table 3.1 below. Briefly, despite the fact that both case study research and AR cope with context-bound information, there is a difference between the

“describer” of case study and the “implementer” of AR. A case study research usually initiates with the researchers’ awareness of certain phenomena, while an action research initiates frequently with the issues or problems within some practical situation with which the researchers interact. Hence, the aims of action researchers are not only to make their theoretical contribution but also fulfil their practical needs (Blichfeldt and Andersen, 2006). In this regard, an AR requires the active and deliberate self-involvement of the researchers in the context of their investigation (McKay and Marshall, 2001). On the other hand, case study researchers often draw on the participants to investigate phenomena which are specified prior to doing the study (Yin, 2009). Given that, collaboration between the researchers and the participants is seen to be more critical to the success of an action research than a case study research.

Another difference between AR and case study research relates to the researchers’ stance on how and to whom they distribute their findings. Although case researchers sometimes take it upon themselves to distribute their findings to participants in the study, the findings are primarily targeted at the academic community. In contrast, action researchers have a commitment to feed data back into the community with which they cooperated when identifying and resolving a practical problem.

**Table 3.1: Differences between case study research and action research**

| <b>Case study</b>                                       | <b>Action research</b>  |
|---|---|
| Researcher is observer                                  | Researcher is active participant                                  |
| Exploratory, explanatory, or descriptive                | Prescriptive, intervening   |
| Focus on ‘How’ and ‘Why’ questions                      | Additional focus on ‘How to’ questions                            |
| Findings are primary targeted at the academic community | Findings are targeted at both the practice and academic community |

*Source: Based on information from Blichfeldt and Andersen, 2006, pp. 3-5.*

In terms of considering the appropriateness of AR in the IS context, IS researchers (e.g., Baskerville and Myers, 2004; , Lindgren et al., 2004; Mathiassen et al., 2012) have long argued that AR should be seen as one significant way to address the issue of improving practical relevance for future IS research. For instance, Lindgren et al.

(2004) argued that AR distinguishes itself with other methods because it is an interventionist method which allows the researchers to develop knowledge useful to both research and practice. In this regard, the researchers bring knowledge of AR and general theories while the practitioners or client participants bring situated or practical knowledge (Baskerville and Myers, 2004). Mathiassen et al. (2012) further added that AR provides the researchers with rich opportunities to bridge the gap between theory and practice because action researchers also see problem-solving as their responsibility to assist the practitioners by not only developing but also applying theory.

Whereas AR is increasingly recognised as a feasible research strategy to bridge the gap between the research and practice in the IS area, the small representation of published AR studies as compared to case study research comes as a surprise (Avison et al., 2008; Knock, 2004). One reason is that even though in AR the researchers attempt to change the situation being studied, they do not usually have full control over such situation (Davison et al., 2004), especially when AR is viewed as “lived practice” rather than “self-improvement” (Judah and Richardson, 2010: 420). In this respect, Avison et al. (2001: 30) pointed out that:

“Once the project has been started the mechanisms by which authority is defined are very important. These mechanisms include the determination of action warrants, power over the structure of the project, and processes for renegotiation and/or cancellation. Action warrants define the authority under which action may be taken. Rarely will an organisation cede ultimate authority for organisational action to an external researcher. This guarded commitment is reasonable since the researcher’s motives are divided between research goals and organisational problem-solving goals”.

Given this concern, despite the fact that the strength of AR is the strong integration of research and practice (e.g., research goals and organisational problem-solving goals), its most significant weakness is the difficulty to control the focus of the research process (De Villiers, 2005). Moreover, the action researchers often see themselves not as experts but as someone who are involved in the research process (e.g., participants) (McNiff, 2002). Therefore, decision on action is shared among people involved instead of being decided by the action researchers (McIntyre, 2008).

Such decision on action may in some cases force the researchers to abandon the research site before the study is completed due to events that are outside of their sphere of control (Knock, 2004).

Another reason for a relatively few studies adopting AR in the IS field is the deep involvement of researchers with client organisations. This may hinder good research by introducing personal biases in the conclusions. As Kock (2004: 269) addressed this problem:

“While deep personal involvement from the part of the researcher has the potential to bias research results, it is inherent in AR because it is impossible for a researcher to both be in a detached position and at the same time exert positive intervention on the environment and subjects being studied”.

In order to deal with the downsides of AR, Coghlan and Brannick (2005) suggested that the researchers should develop action research skills such as social skills to engage with others or critical skills to share and critique others’ views in the inquiry process. However, in the current study, although I sought to establish and maintain good research-practice relationships to support the creation of relevant research results (see Section 3.4.4 and 3.6), gaining complete control over the change project was not possible, not only as the chosen organisation did not permit it but also as the complexity (e.g., different expertises required for the project) and high risk (e.g., large-scale change) related to the project. Therefore, another way to deal with this concern is to adopt a hybrid approach borrowing ideas and concepts from AR and conventional methodologies in order to study the topic of interest with a flexible involvement role of the researchers (Mathiassen, 2002, Mathiassen et al., 2002):

“...When designing and organising research projects based on collaboration with practitioners the challenge is not so much which methods to choose. Rather it is to find practical ways to combine qualitatively different research approaches to support the diverse, and partly contradictory goals involved in such an effort...I call this approach collaborative practice research and it combines action research, [field] experiments, and conventional practice studies to strike a useful balance between relevance and rigour” (Mathiassen, 2002: 322).

Given the preceding discussion, this study was basically organised as “an action research effort to interact closely with practice and to support close collaboration between practitioners and researchers” (Mathiassen, 2002: 332). However, this basic approach was complemented with the proponents of case study methodology, whenever feasible and useful. Such a combined strategy supports the variety of research goals (e.g., theoretical and practical contribution) discussed above as well as leverage the case study’s unique strength that is “its ability to deal with a full variety of evidence-documents, artifacts, interviews, and observations” (Yin, 2009: 8). Moreover, it also compensates for the greatest weakness of AR (e.g., lack of control over the research process). As a result, I neither saw myself as “outside researcher” with no direct involvement in action as in case study research nor as “involved researcher” with active involvement in action as in AR (Walsham, 2006: 321). Instead, I would view involvement now as more of a spectrum over which the researchers can decide the degree of involvement which is suitable for their research. In this study, my degree of involvement (as being established with the CEO and IT Department Director of the AlphaBank, see Section 3.4.4) is similar to Baskerville and Myers’s (2004) point of view in which the researchers bring knowledge of AR and general theories while the practitioners or client participants bring situated or practical knowledge. Hence, during this study, I played a role as a “facilitator” rather than an “implementer” of action as discussed by Blichfeldt and Andersen (2006).

### **3.4.1. Foundations of collaborative practice research**

Collaborative practice research (CPR), as later called by Mathiassen (2002), was developed as part of a Scandinavian information systems research tradition during the 1980s and 1990s (e.g., Mathiassen, 1981; 1998; Bjercknes and Bratteteig, 1995; Nygaard and Sorgaard, 1987). Mathiassen (1998) also described CPR as reflective system development. This approach emerged due to the need of developing an approach for system development that intertwines both research and practice. According to Mathiassen (1998), there were two important trends that generated such need. First, there was a shift away from technology towards its use. Second, the applications of strategic systems have become more integral parts of business strategies and have transcended conventional boundaries for using technology. As a

result, CPR was developed and based on inspiration from a number of sources from which a variety of elements have been picked up along the way to be used, modified, and combined.

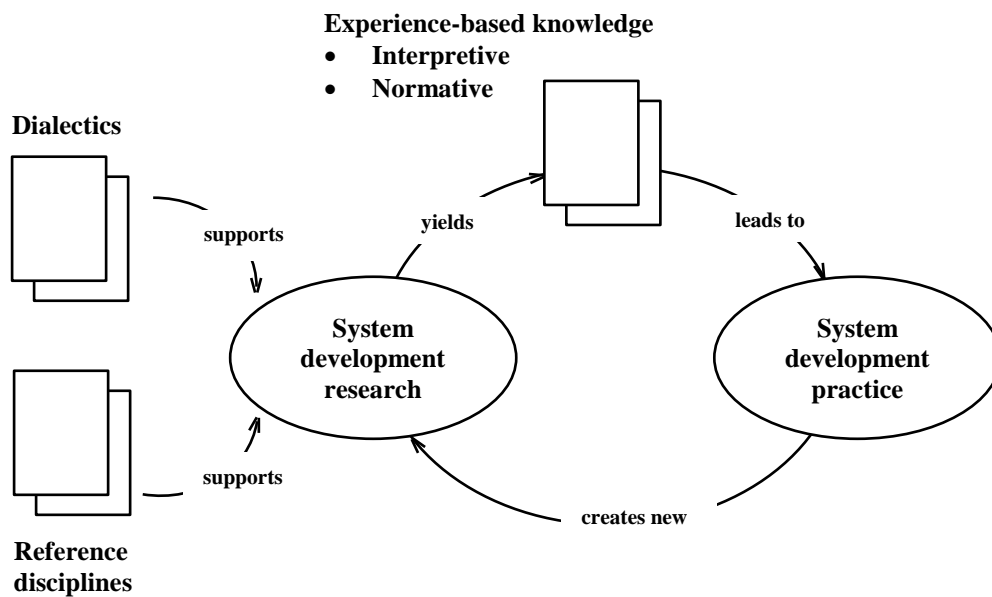
Following Schon's (1983) study of how professionals (e.g., engineers or managers) think in action, Mathiassen (1998: 25) argued that the "traditional conception of knowledge" in which the researchers provide knowledge and the practitioners formulate problems and test the usefulness of research results is insufficient to explain how the practitioners deal with problematic situations and think as part of their practice. In other words, although the traditional conception of knowledge is an efficient way to organise research and practice, it clearly has its limits. Specifically, it depends on agreement between the researchers and the practitioners about means and ends. Yet, when there is no obvious solution or when ends are not fixed and clear, but confusing and conflicting, there is no simple way in which the practitioners can select the pre-determined methods suggested by the researchers to solve problems. When the practitioners find themselves in unique or unstable situations, they might criticise their initial understanding of the phenomenon and construct and test a new description of it. When they are stuck, they might find completely new ways to frame the situation and impose these on the situation to see different problems and opportunities. In this way, the practitioners engage in what Schon (1983: 268) calls "reflective conversations with the situation". Thus, professional practice is portrayed as an intellectual process of practitioners posing and exploring problems they have identified themselves. In order to obtain such inside knowledge, Mathiassen (1998: 19), with reference to Schon (1983: 323), argued that:

"The practitioner does not function as a mere user of the researcher's product. He reveals to the reflective researcher the ways of thinking that he brings to his practice, and draws on reflective research as an aid to his own reflection-in-action. Moreover, the reflective researcher cannot maintain distance from, much less superiority to, the experience of practice...he must somehow gain an inside view of the experience of practice".

Given the importance of the insiders' knowledge, a CPR uses AR as the basic practice form in research. Getting inspired by Checkland and Scholes' (1990: 3) notion of the "experience-action cycle"; the problems, challenges, and opportunities

involved in systems development practice are considered the starting point for a CPR. Such problems or challenges are primarily informed by various reference disciplines (e.g., organisation science or management science) and dialectic reflections (e.g., the dynamic and contradictory nature of the researchers' disciplines) as illustrated in Figure 3.1. Research activities subsequently yield experience-based knowledge that leads to new and improved systems development practices. The knowledge that is developed is both interpretive (e.g., helping us to understand and make sense of practice) and normative (e.g., providing support for performing systems development or improving present practices) (Mathiassen, 1998). In this way, AR assigns primary importance to practice and it emphasises the intrinsic relations between practice and research (Baskerville and Wood-Harper, 1996).

**Figure 3.1: Action research in collaborative practice research**

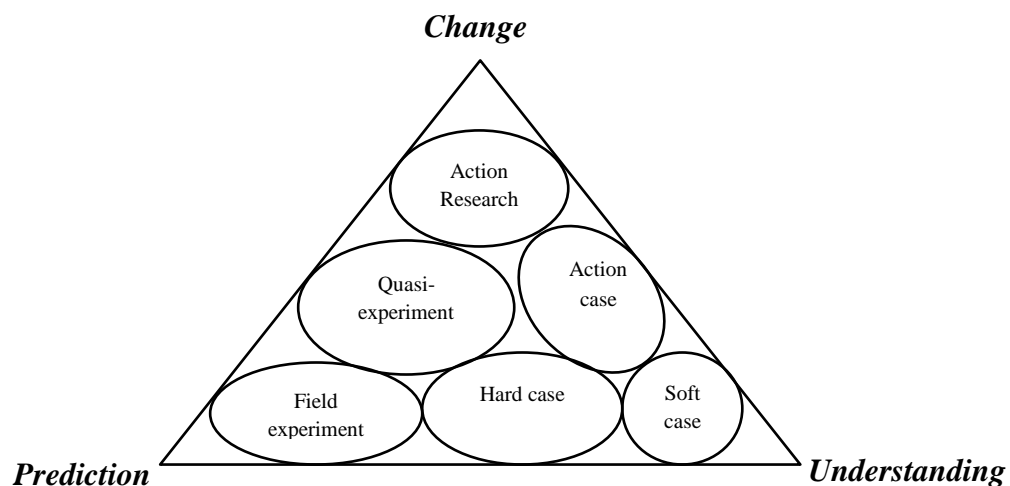


*Source: Based on Mathiassen (1998), p. 18.*

On the other hand, Mathiassen (1998), based on the IS research framework outlined by Vidgen and Braa (1997), also contended that AR is not considered to be a panacea to systems development research. Vidgen and Braa (1997) mapped previous well-known research methods for studying IS development in organisations by categorising AR, field experiment and soft (or interpretivist) case study as three purified forms of research; corresponding to the research purpose of change, prediction, and understanding respectively. Meanwhile, they categorised action case,

quasi-experiment and hard (or positivist) case study as three hybrid research methods (see for details of each form of research, Vidgen and Braa, 1997: 527-8). Vidgen and Braa (1997: 529), with reference to McGrath (1982: 69), argued that “the research process is to be regarded not as a set of problems to be ‘solved’, but rather as a set of dilemmas to be ‘lived with’”. Thus, the triangle, as illustrated in Figure 3.2, pinpoints the contradictions (or dilemmas) that have to be dealt with in the “dilemmatic” process of designing a research project. From their point of view, a research might be designed to maximise one of the desiderata (e.g., prediction, understanding or change). Alternatively, a researcher might also try to maximise two of the three desiderata. However, as McGrath (1982: 76) argued, “there is no way - in principle - to maximise all three conflicting desiderata of the research strategy domain”. For instance, it is not possible for a researcher to be involved with IS practice as though she/he were entirely and indistinguishably part of the organisation, while also being an outsider who can stand back from the situation and make interpretations, and at the same time produce rigorous results in the positivist tradition. Hence, “increasing the proportion of one ideal type of research outcome is counter-balanced by a diminution of one or both of the other ideal types” (Vidgen and Braa, 1997: 529).

**Figure 3.2: Research methods for studying IS development in organisations**



*Source: Based on Vidgen and Braa (1997), p. 528.*



Although Mathiassen (1998; 2002) appreciated the work of Vidgen and Braa (1997), Mathiassen (2002: 331) argued that:

“Quite often it can be difficult to distinguish action research from field experiments as the same research activity can be viewed from both perspectives. Viewed as an action research effort emphasis is put on creating knowledge based on problem solving and change in the client organisation. Viewed as a field experiment the emphasis is instead on designing, implementing, and evaluating artefacts (e.g. guidelines, standards, methods, techniques, or tools). The difference between these two approaches is therefore tightly related to the commitment to improving practice (action research) versus the intention to develop normative support (field experiments)”.

Given such similarity, a CPR proposed by Mathiassen (2002: 322) which combines “qualitatively different research approaches” to support the diverse, and partly contradictory goals involved in research design is similar to the “action case” discussed by Vidgen and Braa (1997: 528). Such combination tends to support three goals of a CPR which consist of understanding, supporting and improving practice. This combination also overcomes the weakness of AR and enhances the relevance and rigour of research as discussed in previous section.

In summary, a CPR which can be seen as a variant of AR has the following characteristics: 1) The aim is to understand, to develop support for, and to improve specific professional practices within the participating organisations; 2) The activities are carried out in close collaboration between researchers and the involved practitioners; 3) The research process is guided by a pluralist methodology, with AR as the dominant approach and other conventional methods (e.g., case studies or field experiments) as supplementary approaches; 4) Each CPR effort can lead to a portfolio of focused research projects based on the ongoing and emerging problem-solving efforts in the participating organisations (Iversen et al., 2004: 397).

### **3.4.2. Rationale for choosing single case embedded design**

It is noted that a CPR is likely to include case(s) (Mathiassen et al., 2002). As a consequence, one frequent challenge to theory building from the case study method is the decision to include one or several cases in the project (Eisenhardt and Graebner, 2007). Although a single case design can richly describe the existence of a phenomenon, multiple cases design typically provide a stronger base for theory building (Bryman and Bell, 2007). For instance, multiple cases enable comparisons that clarify whether emergent findings are simply idiosyncratic to a single case or consistently replicated by several cases (Eisenhardt and Graebner, 2007). However, Yin (2009: 45-46) argued that a single case is deemed to be appropriate if the conditions apply to some of these five rationales: 1) When a single case represents a critical case to test a well formulated theory to confirm, challenge or extend the theory or demonstrate whether the proposition is correct or an alternative explanation is more relevant; 2) The case is unique or extreme case which is worth documenting and analysing; 3) The case is a representative or typical one; 4) The case is a revelatory case (e.g., it is a situation previously inaccessible to scientific investigation); 5) The case can be longitudinal respectively.

In this study, a single case organisation embedded design is considered reasonable for several reasons. First, because one of the study's purposes is to evaluate the set of change management strategies proposed, achieving this purpose requires to establish or test under what condition the emergent theory will and will not hold. Second, as an AR often requires proximity and intimacy between the researcher and the organisation, it is extremely difficult for choosing an organisation where the researcher is not its members. That explains why most AR studies are based on a single case organisation design and conducted at the places where the researchers are working (Bryman and Bell, 2007). In addition, one important aspect of AR is that the researcher is required to have some influence over the change process and this generally cannot be solved within at the departmental level but top-down intervention. In other words, support from top management is not likely to be acquired unless the research is strategically relevant to the organisation in terms of its mission and benefits. Gaining such support is difficult if the researcher knows almost nothing about the organisation.

Last but not least, the focus of the study is on the IS pre-implementation phase to avoid making observations on downstream results of the upstream resistance process. In this case, the risk is that I have to deal with a dormant project and long stagnation periods before making the proposed solutions. A long period of participation in the problem-solving activity is the key reason that limits my choice for choosing multiple cases.

### **3.4.3. The case organisation description and rationale for choosing it**

AlphaBank is one of the youngest members of Vietnam's commercial banking system. Ending the fiscal year 2012, the bank has expanded its number of distribution channels to 95 branches and developed its staff volume to more than 1,400 people.

With the increasing volume of transactions and growth of customer base as well as the requirements for new services (e.g., internet banking, real-time card authorisation, mobile phone payments), the current version of the bank's CBS (see Appendix A), which was developed by a leading global provider of CBS in 1997 and is based on 2-tier architecture, appears to have many limitations.

Given the need for a more robust system, the upgrading project of the CBS was put forward and a project taskforce has been set up since 2011. The taskforce consists of two main staff pools from the bank. The first pool includes administrative employees who have in-depth knowledge of the business processes, organisational structure, policies and procedures. Their roles in the team are to ensure that the proposed system can be used efficiently and provides mandatory functionalities of the bank. The second pool consists of IT staff whose roles are to ensure the appropriateness of proposed system customisation, test the proposed system and gather further the bank's requirements. Since 2011, several meetings organised by members and non-members of the upgrading project have turned out to be unsuccessful. Resistance to the proposed system within and among different groups of staff has arisen, causing delays in the project. At the time of this study, the CBS upgrading project is still seen at the pre-implementation stage in which the contract with the appropriate vendor has not been made (see Section 5.2 for more details).

This case was chosen because it is consistent with the research objective which focuses on investigating why and how resistance to IS change emerges at the IS pre-implementation phase as discussed in Section 1.2. Additionally, I used to work for this case organisation and, therefore, it is easy for me to gain support from the top management and staff involving the upgrading project. As a middle manager at this case for over two years, I had good contacts at all levels of the AlphaBank and the particular theme of this study, involving dealing with resistance to IS change, was known to provide attractive sources of information for the bank under investigation, especially the IT department director who is the leader of the CBS project. Under different conditions, it might be challenging or even impossible to exercise the collaborative practice approach.

#### **3.4.4. Access prior to the study**

As discussed previously, a CPR is similar to an AR study in the sense that it requires the collaborative nature between the researcher and participants. In this regard, the first challenge for this study was to ensure that the case organisation understood how a CPR works and what its benefits and shortcomings. In order to achieve this understanding, I followed the criteria suggested by Davison et al. (2004).

Particularly, beside the reference letter sent to the case organisation (see Appendix B), my research proposal was also enclosed and several contacts had been made to the bank's top management to answer their enquiry. Furthermore, because I used to be a member of the bank, there would be high potential for the confusion of my role in the project (e.g., a practitioner or a researcher or both). In order to avoid any potential misunderstanding over my role in the organisation during this study, an agreement specifying my role and responsibilities was conducted with both the CEO and IT Department Director of the AlphaBank (see Appendix C). According to this agreement, my role was decided merely as a researcher who was expected to work as a facilitator in this CBS change project. The reason for this was partly due to the fact that I was no longer a member of the bank at the time of this study. Hence, it was confirmed that I would not be responsible for any daily task assigned to the bank's members. Instead, my responsibilities in the project were to help the bank's top management to understand and make sense of their current situation as well as to

figure out the feasible solutions for the identified problems in their current change practice. In addition, since the full scope of the process could not be determined in advance and it might involve different areas, the implementation of recommendations was negotiated as the responsibility of the members of the organisation. In other words, the bank's members were decided to be the ones who would be responsible for when and how this project was going to proceed. This is similar to the single role of the insider researcher discussed by Coghlan and Brannick (2005). However, this did not mean that I would play a role as "outside researcher" with no direct involvement in action (as discussed in Section 3.4) or I would not influence the participants' decision-making process. In contrast, it was also one of my responsibilities to embody that role in ways that would challenge and reflect the participants' desires to move this project in a particular direction. Given that, I kept reminding the top management that I was not there to "make them do this" or "force them to do that". I also was not the sole authority who could determine the actions to be taken within the context of the project. Quite the opposite, I was a facilitator or would act like "a mirror" that could help them to reflect themselves. Finally, as being negotiated, the bank did not have to allocate any specific financial or material resource for this study. On the other hand, they agreed to allow me to access to individuals and groups who are essential to the completion of the research, use collected data and relevant documents only for research purposes and with a promise of confidentiality.

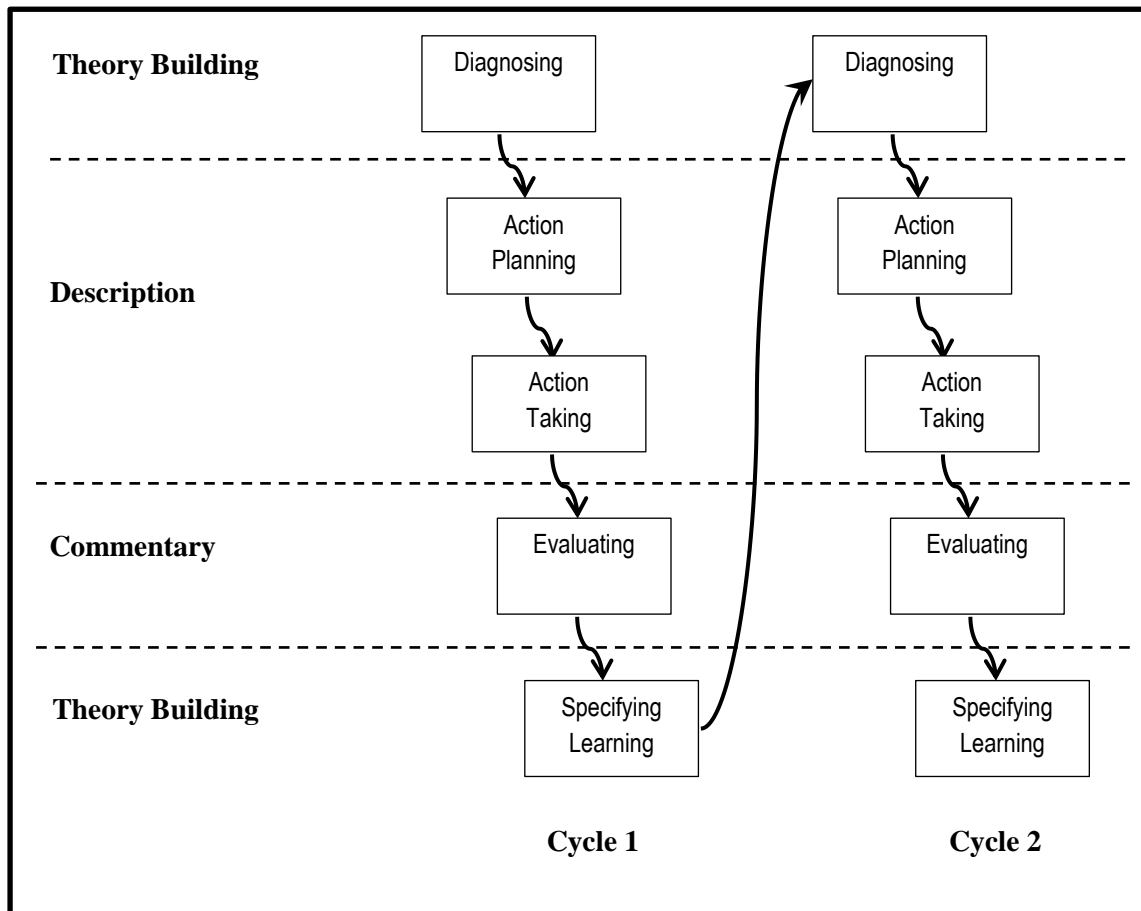
### **3.5. Research design**

According to Mathiassen (2002), there are different ways to design the steps and iterations in a CPR. However, as he argued, because of the underlying dual imperative of a CPR, its design must include three core research activities: to develop the researchers' understanding of systems development, to build new knowledge that can support practice, and to learn what it takes actually to improve practice. In Lewin's (1946) simplest form of AR, his action research cycle also comprises three core activities: planning, action, and fact finding. According to Coghlan and Brannick (2005), planning comprises having an overall plan and a decision regarding what the first step to take is. Acting involves taking that first step.

Finally, fact finding involves evaluating the first step, seeing what was learned and creating the basis for correcting the next step. So, as Lewin (1946: 146) wrote, there is a continuing “spiral of steps, each of which is composed of a circle of planning, action and fact-finding about the result of the action”.

Since the work of Lewin, these three core steps have been articulated differently by different action researchers, from Mathiassen’s (2002: 327) simple “understand-support-improve” to Iversen et al.’s (2004: 419) complex action research risk management framework involving ten steps from “appreciate problem situation” to “elicit research results” and iterative cycles from step 4 to step 7 include “develop-design-apply-evaluate”. Because the research design of Susman and Evered (1978) is one of the most widely adopted in the IS field (e.g., Lindgren et al., 2004; Street and Meister, 2004) and deemed to be appropriate to the situation at the AlphaBank, this study followed their design framework and was based on a cyclical process of five phases including: *Diagnosing* which aims to investigate the main reasons causing resistance to the IS upgrading project from a multilevel perspective (i.e., individual, group and organisational level), *Action planning* of different change management strategies according to the reasons of resistance identified, *Action taking* corresponding to the set of selected strategies, *Evaluating* the consequences of proposed actions by investigating how the staff’s reaction to the IS upgrading project has changed, *Specifying learning* or *reflecting* on overall findings induced from the cycle. The *reflecting* phase also enables me to reach a decision as to whether or not to proceed through an addition process cycle (if needed) as illustrated in Figure 3.3.

**Figure 3.3: Research design framework**



*Source: Based on Street and Meister (2004), p. 481.*

Before entering the detailed research process, there are several issues that require clarification. First, Susman and Evered (1978: 588) considered “all five phases to be necessary for a comprehensive definition of action research”. In other words, an AR must go through at least one full cycle of these phases if the researchers should call it a proper AR (Goldkuhl, 2008). However, Susman and Evered (1978) also acknowledged, with reference to Chein et al. (1948), that only some phases may be performed and the inquiry may still be seen as AR. Chein et al. (1948) described four types of AR (i.e., diagnostic, participant, empirical, and experimental) which reflect different degrees of intervention and collaboration. For instance, he used the term “diagnostic action research” or “research designed to lead to action” (p. 45) in which the researchers are involved only in collecting data for diagnosis of the problems and feeding the data back to the community. Within this type of AR, there is no specific action that is taken within the research process. By comparing Susman and Evered’s (1978) five phases of AR with four types of AR discussed by Chein et al. (1948), an

AR project may differ in the number of phases depending on the degree of involvement of the researcher as discussed in Section 3.4. In this study, given that the implementation of recommendations or actions was negotiated as the responsibility of the members of the organisation, I only took a role as backstage supporter at the “action taking” phase and the study therefore would be similar to the “participant” form of AR discussed by Chein et al. (1948).

The second issue involves the exit criteria or how we (the practitioners and I) know when to stop the research process. Obviously, it is appealing to continue with the research process for as long as possible since resistance is the phenomenon not only at the pre-implementation stage (Meissonier and Houze, 2010) but also during the implementation (Joshi, 2005) or even at the post-implementation stage (Wagner and Newell, 2007). Because this study aimed to focus on the pre-implementation stage as a stepping stone for ensuring the success of the rest of the project at the AlphaBank, the research process (as negotiated between the chosen organisation and me) was supposed to end when we both agree that our proposed solutions framework is in stable and useful form and that the practitioners no longer needs outside help. This exiting point is also seen plausible for answering the research questions (as outlined in Section 1.2) and for this particular case in which the implementation of actions was negotiated as the responsibility of the practitioners.

Finally, it must be noted that there are two action research cycles functioning in parallel as illustrated in Figure 3.3 to make this study different with a consultancy work. Similar to the dual cycle process (i.e., problem solving interest and research interest) discussed in McKay and Marshall (2001), Zuber-Skerritt and Perry (2002: 175) called these cycles as the “core action research” cycle and the “thesis action research” cycle. The core action research cycle, which consists of diagnosing, planning, taking action and evaluating phase, is developed according to the practical problem which needs to be solved at the AlphaBank. At the same time, I also need to change my perspective from the practitioner to the researcher and concern these activities from a meta-level (e.g., reflection on the learning process). This means that I have to evaluate how the research project is going (e.g., how these steps are being conducted and how they are consistent with each other) and what I am learning from the project. In this regard, the thesis action research cycle requires me to reflect on



the activities in the core cycle and the inquiry into these activities is fundamental to the development of actionable knowledge.

Since the reflection on the core cycle is the basis for the thesis cycle, Mezirow (1991), cited in Coghlan and Brannick (2005), suggested three forms of reflection that can be applied in this study:

*Content reflection:* is where the researchers need to think about the content of what is diagnosed, planned, acted on and evaluated.

*Process reflection:* is where the researchers think about the process of how diagnosis is undertaken, how action planning is drawn from that diagnosis and is directed and then how evaluation is conducted.

*Premise reflection:* is where the researchers criticise underlying assumptions and perspectives which govern the attitudes and behaviour under investigation.

Despite the fact that these three forms of reflection appear to be useful, Coghlan and Brannick (2005) emphasised that the activities of reflection should be not confined to the researcher's first-person practice as the individual action researcher. Instead, as they argued, the second-person practice with the groups and teams engaged in the AR (which enable the researcher to see him or herself from an external perspective) should be added to the learning cycle. In this case, the second-person practice also attends to the steps of content, process and premise reflection and the dynamic of this "reflection on reflection" enables the AR to be more than everyday problem solving (Coghlan and Brannick, 2005: 25). As a result, it is learning about learning or, in other words, "double-loop learning" in which learning are "crafted in ways that can be tested by logic that is independent of the actor" (Argyris, 2003: 441).

When being applied to this research process, it is realised that whereas the core cycle does not have to satisfy academic standards, the thesis cycle should fulfil them. As Coghlan and Brannick (2005) explained, the thesis cycle requires the researchers to focus on the quality and rigour of the inquiry. Given the importance of these two identical cycles, Chapter 4 will discuss not only the appropriate data collection and sampling methods at each stage but also the activities relating to my field work such as how I accessed and engaged others in this study.

### **3.6. Criteria of quality for this CPR**

Similar to an AR, a CPR seeks practice relevance in the research results by committing to a particular problem situation. Unfortunately, this often leads to a number of limitations and pitfalls: 1) Lack of impartiality of the researcher; 2) Lack of scientific discipline; 3) Mistaken for consulting; and 4) Context-bound leading to difficulty of generalising findings (Iversen et al., 2004: 407). Therefore, as they suggested, collaborative practice researchers need to explicate a set of criteria to ensure both relevance and rigour in the execution of the CPR process. In this study, the criteria to avoid the above pitfalls were based on Herr and Anderson (2005). According to them, most action researchers agree on the following goals: 1) The generation of new knowledge; 2) The achievement of action-oriented outcomes; 3) The benefits for both researchers and participants; 4) Results that are relevant to the local setting; and 5) A sound and appropriate research methodology (p. 54). Given these goals, they suggested five quality criteria including outcome, process, democratic, catalytic and dialogic validity to evaluate an AR. Each of these criteria is discussed as below.

*Outcome validity*: refers to “the extent to which proposed actions lead to a resolution of the problem that led to the study” (Herr and Anderson, 2005: 55). Similar to Reason’s (2006: 191) notion of “pursuing worthwhile purposes”, action researchers must continually ask what worthwhile purposes they are pursuing and whether such purposes continue to be appropriate and relevant. In the present study, outcome validity was enhanced by working closely with the bank’s top management and the upgrading project taskforce to ensure that the proposed solutions are relevant to the problems identified at the diagnosing stage. Moreover, instead of simply focusing on solving the problems, I also kept my mind open to update relevant theories and reframed the problems in a more complex but effective way, leading my research to a new set of questions or problems. In particular, my initial interest about the resistance to the CBS change at the AlphaBank was mainly at the individual and group level. However, when discussing with the IT Department Director, I realised that the key problems leading to the project postponement are also at the organisational level, especially for the pre-implementation stage when resistance to

IS change is mainly formed by the individuals' perceptions rather than their experience of using the proposed system. Therefore, in order to investigate the causes of resistance to IS change at this level, an update of relevant literature to diagnose resistance at this level was put forward to identify a template or model that can be used to help me decide which aspects of the AlphaBank to look at. Otherwise, simply focusing on the symptomatic causes of resistance or trouble spots probably lead to the situation in which the problems keep reoccurring.

*Process validity*: requires that a rigorous AR must be conducted in a dependable and competent manner. As Herr and Anderson (2005: 55) stated, this validity not only deals with “the quality of the relationships that are developed with participants” but also “the much-debated problems of what counts as evidence to sustain assertions”. During the study, several acts were done to ensure the process validity. First, as relationship with participants needs the development of trust, I spent months with the bank's top management to ensure they understand my study and what are the benefits and drawbacks for them. A researcher-client agreement letter which contains mutual guarantees for behaviour in the context of the study was also designed to provide a solid basis for building trust with the client participants. Second, the interview guide used for semi-structure interviews at the diagnosing phase was firstly sent to both the CEO and IT department director to check for relevance and meaning difficulties as well as ask for suggestion on any missing key area. It then was sent to my research supervisors to get some academic feedback before applying it in the fieldwork. Finally in terms of confidence in the truth value of collected data, methodological triangulation using a variety of data collection methods (see Chapter 4 for details) was applied so that the findings are not depended on only one kind of data source. Additionally, the data collected from semi-structure interviews were verified by observing non-verbal responses (e.g., facial expressions and gestures), giving the participants opportunity to ask questions during the interviews as well as sending the transcripts back to the participants via email for checking whether they recognise their responses. Meanwhile, in order to avoid any risk of making the research findings at the strategic development and implementation phase too one-sided or even distort (e.g., through my own experience and personal perspective), I always maintained a positive and non-threatening self-image by avoiding my influence

during the participants' decision making process as well as reflected on my own conduct with the participants at the end of each activity.

*Democratic validity*: refers to “the extent to which research is done in a collaboration manner with all parties who have a stake in the problems under investigation” (Herr and Anderson, 2005: 56). Another version of this criterion is what Reason and Bradbury (2001: 448) called “relational practice” which requires including and respecting the perspectives of all participants involved. As they argued, a mark of quality in an AR is that people will get energised and empowered by being involved and, therefore, they possibly will provide action researchers with newly useful insight as a result of their increasing critical awareness. In this regard, Ozanne and Saatcioglu (2008: 426) figured out that “outcome validity is threatened when democratic validity is not achieved”. Because collaboration is an important characteristic of any AR, I realised from the beginning that the motivation leading to this study should not only be derived from my interest but also from those who are participating. Given that, several contacts had been made to the bank's top management to ensure that the problems under investigation are also their concern. Moreover, informal discussions with both CEO and IT Department Director during that time were done to identify different aspects of the problems and who should be involved in the research. Finally, the new knowledge creation was developed as the involved parties (i.e., client participants and me) discussed the meaning generated within the process of solving practical problems to the satisfaction of all involved (see Chapter 5 for details).

*Catalytic validity*: while this criterion overlaps to some extent with democratic validity in terms of collaboration and empowerment, Ozanne and Saatcioglu (2008: 427) distinguished this by explaining that it is “the extent to which the research collaborators are invigorated to understand and change social reality both within and beyond the research study”. Although several acts was performed to deepen the involved parties' understanding of the reality as discussed above, the greatest challenge is how to energise the participants to take actions to change the current situation or the unsatisfactory conditions at the AlphaBank. In order for meaningful actions and change to occur, I followed the suggestions made by Davison et al.'s (2004: 75) “principle of change through action” in which the explanations for the

proposed actions were offered to the client participants before the intervention stage and only approved actions were implemented.

*Dialogic validity:* Similar to the belief in the significance of peer reviews to improve the research quality, Herr and Anderson (2005: 57) suggested that a good AR must “pass through the process of peer review”. This criterion, as Ozanne and Saatcioglu (2008) explained, requires that the researchers engage in discussions to challenge the research findings for alternative explanations, inconsistencies, problematic assumptions, biases, and so forth. In order to enhance dialogic validity, I not only participated in critical and reflective dialogue with my supervisors but also my participatory research group which consists of my critical friends and other action research students from different disciplines. Moreover, I also engaged in peer review to gather feedback on the findings from key informants at the AlphaBank.

### **3.7. Ethical considerations**

Ethical procedures are an important part of all research, especially for AR in which the participants have much more control and involvement in the research process (Stringer, 2007). Hence not only because of the requirements of the academic world for ethical considerations, it is also the client participants’ own interests for me to act and behave along with the ethical bases. Moreover, since I need to attend to the continuing change process, I cannot act as an outsider researcher who gets in, collects the data and leaves without any regard to the consequences of my actions. Given these reasons, besides a completion of a research ethics form sent to the Research Ethics Review Panel at the London Metropolitan University, I turned to Brydon-Miller and Greenwood (2006) and their key ethical issues to ensure an acceptable standard of ethical practice.

*Coercion:* One of the issues raised by Brydon-Miller and Greenwood (2006: 125) is how action researchers “provide assurances that the individuals with whom they wish to conduct the study do not feel any pressure in any way to participate”. This issue becomes even more important when I used a top-down approach in the data collection to gain more support and trust from the employees (see Section 4.3.3 for details). In this case, it probably exist the situation in which the employees agree to

participate not because of their willingness, but because their leaders ask them to take part. I therefore made sure that the consent form (see Appendix D) was discussed in person and explained in details. I also gave them sufficient time to consider their participation, including time to talk with their colleagues at work. In terms of the leaders, they have a more complex role than the employees because they make contributions not only to the primary data but also the research process in which they also act as co-researchers. Therefore, the same procedure was performed in addition with explanations about their collaborative roles to help them to make an assessment of their collaborative involvement. As this is a voluntary research, all participants were also offered the right to skip any question they do not like to answer or even withdraw from the research and take back the records of their responses at any time for any reason.

*Confidentiality:* Because I used different data collection methods (i.e., semi-structure interviews, documentations, informal discussions) (see Figure 5.2) and the data collected are seen to be private and confidential, it is important to ensure anonymity and confidentiality. Besides the declaration of confidentiality provided by me before each interview, all participants were assigned pseudonyms so that they cannot be identified by anyone except me (see Section 4.3 and 4.4). Furthermore, all data were recorded and kept by me personally. However, the issues of confidentiality and anonymity also raise problems with regard to the secondary analyst of qualitative data. Particularly, during the coding process (see Section 4.6), I had asked one of my critical friends to act as an independent coder to generate separate lists of codes and code the transcript, which then were used to compare with my work in order to reduce the bias and subjectivity in the coding phase (e.g., my attempt to make the data fit). In this case, as Bryman and Bell (2007) stated, the difficulty is how to ensure that the same safeguards concerning confidentiality can be guaranteed when the secondary analyst who is provided by the primary researcher examines such records. To address this challenge, the secondary analyst was only provided with the transcript which had been checked by me for anonymity. Moreover, a letter of agreement (see Appendix E) was made to ensure that neither she nor anyone acting on her behalf will disclose or use the information provided.

*Protection for participants:* Another ethical issue is that the researchers must take all reasonable precautions to ensure that “the participants are not harmed by the research process in which they are taking part” (Brydon-Miller and Greenwood, 2006: 121). In the present study, I attempted to minimise potential harm to the participants by not releasing any collected information into the public domain. Furthermore, because the findings at the diagnosing stage need to be reported to the upgrading project team as well as the CEO to identify appropriate change management strategies according to the reasons of resistance, I also acknowledged a potential risk that they will recognise the response providers since they all work for the same organisation. To solve this problem, instead of simply reporting the findings, I only gave them a summary of problems under investigation so that the report was anonymous and any response the participants provided could not be traced back to them personally. Although this solution probably made my diagnosis less convincing to them, my politeness and ethical behaviour really opened doors to the next stage.

### **3.8. Chapter summary**

This chapter outlined my philosophical standpoint as an interpretivist. This philosophy is based on the view that there are multiple realities to be understood and, thus, it is necessary to understand the subjective meanings motivating people’s actions. In line with this philosophical stance, qualitative approach was considered and justified to be more appropriate than quantitative approach for a rich understanding of the subject matter. Furthermore, a collaborative practice research, which was proposed by Lars Mathiassen, was adopted as a suitable research strategy to study the topic of interest with a flexible involvement role of the researchers as well as enhance the relevance and rigour of research. Finally, quality criteria and ethical issues related to the study were discussed. Chapter 4 will discuss the question of how this CPR project is being conducted (e.g., the chosen data collection and sampling methods) and provide the details of the activities relating to my field work at the AlphaBank. Also within that chapter, the questions of rigour and relevance will be argued.

## CHAPTER 4: DESIGN AND PROCEDURE AT ALPHABANK

### 4.1. Introduction

This CPR took place in the period between February, 2013 (when the initial access to the AlphaBank was made) and July, 2014 (when the final report was submitted to the AlphaBank). Its aim was to develop a framework which will be of use to practitioners for understanding and managing resistance to IS change. Therefore, the data was collected firstly to investigate why and how resistance to IS change took place at the IS pre-implementation phase from a multiple-level perspective, and secondly to identify appropriate different change management strategies according to the reasons for resistance as well as to evaluate whether the effects of the resolution actions were realised as planned. The choices of data collection and sampling methods during this CPR were both advocated and contested by weighting up their strengths and weaknesses in relation to the research objectives above and presented in this chapter. Within this chapter, the choice of data analysis method was also discussed. According to the agreement with the leaders of the AlphaBank, the research was decided to end when both parties (i.e., the practitioners and I) agree that the set of appropriate resistance management strategies is in stable and useful form and that the practitioners no longer needs outside help. The design and procedure at the AlphaBank, which will be detailed below, followed three major phases (i.e., diagnosing phase, action and planning phase, and evaluation phase) corresponding to three core research activities proposed by Mathiassen (2002) (i.e., understand, support, improve) as well as three cyclic phases discussed by Cardno and Piggot-Irvine (1996) (i.e., reconnaissance of the problem situation phase, intervention phase, and evaluation of intervention phase). These three major phases also match the key steps of an IS pre-implementation phase discussed by Meissonier and Houze (2010).



## 4.2. Overall design

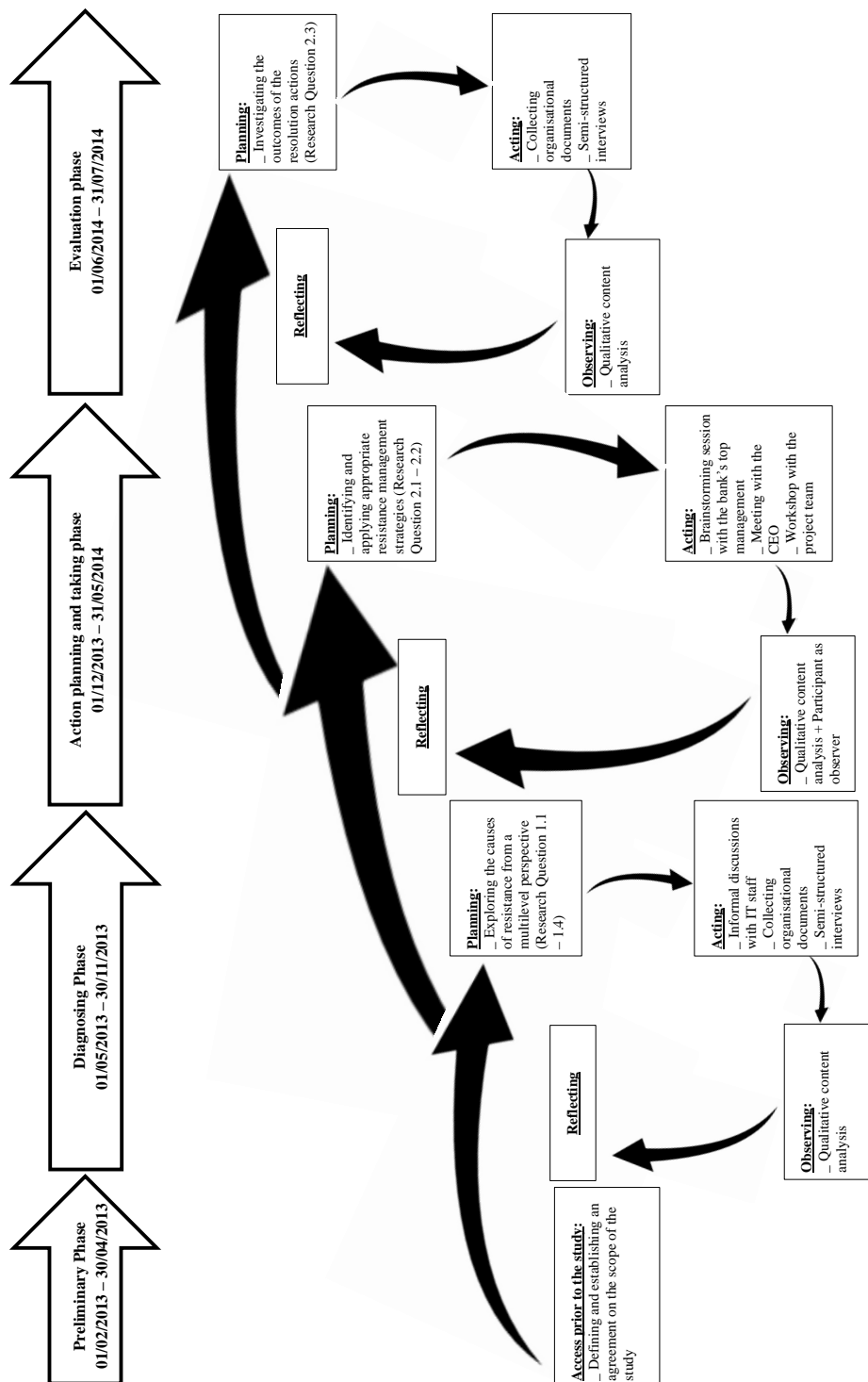
There are many socio-scientific methods that can be used during an AR (Coghlan and Brannick, 2005; Mathiassen, 2002; Jones and Brazzel, 2006). Hence, it is vital to consider any particular case to examine whether the chosen methods are suitable to achieve the research specific objectives. Moreover, given the nature of AR, such decision not only depends on these objectives but also rests upon the results of reflection of the former step or phase as discussed in Section 3.5. In this regard, Coghlan and Brannick (2005: 96) put it:

“Action research has a large degree of messiness and unpredictability about it, in that it is research on real-life action. As the story unfolds unforeseen events are likely to occur. Environmental events may create a crisis in the organisation; fellow key actors may change and so on. The action researcher as actor-director is both creating and acting a script”.

Due to the messiness and unpredictability of an AR, the critical dimension to AR is to ensure that the review of each phase is undertaken and managed. In other words, reflection and learning will not only be the last phase in an AR. Instead, “it will run in continual parallel with diagnosis, planning, implementation and evaluation” (Goldkuhl, 2012: 63). If review is undertaken in this spirit then each major phase in this study can be seen as “experiential learning cycle” which consists of planning, acting, observing, and reflecting (Cardno and Piggot-Irvine, 1996: 21; Coghlan and Brannick, 2005: 35). Hence, a total of three experiential learning cycles corresponding to three major phases (i.e., diagnosing phase, action and planning phase, and evaluation phase) were realised as in Figure 4.1. Briefly, a number of different data collection methods, in both formal and informal settings, were utilised during this study. After several contacts and meetings with the bank’s top management for defining and establishing an agreement on the scope of the study, there were informal discussions with IT staff, documentary data collection involving the CBS project and the organisation, as well as semi-structured interviews at the diagnosis phase and the evaluation phase. Interventions conducted involved a brainstorming session with the bank’s top management, a separate meeting with the CEO, and a workshop with the project team members. Figure 4.1 also gives an overview of the time-line and general goals of each phase. The explanation for the

chosen data collection, sampling, and data analysis methods will be discussed in details in the following sections. The reflection and learning in each experiential learning cycle will be provided in Chapter 5.

**Figure 4.1: Process of fieldwork**



*(Presented by the author)*

### **4.3. Diagnosing phase**

Having defined and agreed on the scope of the study after my initial access to the AlphaBank, the aim of this phase was to explore the primary problems causing resistance to the IS upgrading project (Research Question 1.1 - 1.4). This phase started in May, 2013. At that point in time, it was important for me to develop my in-depth understandings of the changing context, not through a reduction and simplification but rather in a holistic fashion. Consequently, I decided to conduct a qualitative exploratory diagnosis. Different data collection methods were applied for the purpose of cross validation or triangulation. Although the choice of methodological triangulation reflects the good practice which tends to obligate the researcher to triangulate and enhance the validity of the findings (e.g., Oliver-Hoyo and Allen, 2006; Ritchie and Lewis, 2008), it must be noted that the possibility of a failure to collaborate findings (e.g., the data obtained through triangulation may be inconsistent or contradictory) always exists and the researchers still have to provide their rationale for each single chosen method (Bryman and Bell, 2007). Therefore, the following sections will discuss the appropriateness of each method and associated sampling technique.

#### **4.3.1. Documentation**

At the baseline investigation, it is necessary to develop my initial understandings of the changing context such as current organisational practices and directions involving the upgrading project. In this regard, organisational documents can help me to trace back previous strategies and plans and supply the possibility of examining reasons of resistance to the CBS change. Moreover, a documentary method also offers valuable opportunities for enhancing the validity of primary data collected through cross-checking of sources of information (Barnes, 2001).

As the documentary method is adopted, it is important to identify the boundaries of documents and to make the purpose of collecting such documents explicitly so that the data collection procedure will not mislead and the content can be interpreted correctly (Yin, 2009). In the study, the list of organisational documents accessed was

firstly developed and then sent to IT Department Director to make sure that they are accessible and relevant to the research purpose. In overall, the collected documents involve two principle categories that consist of those specific to the system development and process activities and those general to the organisation and its financial services. The list of documents is summarised in Table 4.1. Any document which could not be obtained in full because of the confidential agreement with the organisation was examined through the extracted key information.

Despite the most important use of documents for collaborating and augmenting evidence from other sources, it must be noted that some of collected documents in the study might not be accurate due to “reporting bias” which reflects bias of the author(s) of the report (Yin, 2009: 102). For instance, the collected report on errors logged during business transactions, which was made by using the current CBS’s reporting function, might reflect the CBS Administrator’s perspective on the current system. Thus, as suggested by Yin (2009), such sources of evidence (i.e., proposal, report, deployment plan) were treated only as clues worthy of further investigation (e.g., informal discussions or interviews) rather than as definitive findings because the inferences on these collected documents could later turn out to be false.

**Table 4.1: Documents gathered from the case organisation**

| <b>Document type</b>                    | <b>Information gathered</b>   | <b>Number of document(s)</b>  | <b>Purpose of collection</b>                       |
|---|---|---|--|
| Information about the proposed CBS      | <ul style="list-style-type: none"> <li>• Definitions of the proposed CBS</li> </ul>   | <ul style="list-style-type: none"> <li>• Three brochures provided by the selected vendors</li> </ul>          | To gain initial understandings of changing context |
| Quality assurance information           | <ul style="list-style-type: none"> <li>• Quality standard for an expected CBS (i.e., functional requirements and technical requirements)</li> </ul> | <ul style="list-style-type: none"> <li>• One Request for Proposal (RFP)</li> </ul>                            |  |
| System development plans and strategies | <ul style="list-style-type: none"> <li>• Timeline and delay in deliverables</li> <li>• Implementation strategies information</li> </ul>             | <ul style="list-style-type: none"> <li>• One detailed internal deployment plan for the CBS project</li> </ul> |  |

|  |   |   |   |
|--|---|---|---|
| Help desk calls records                                      | <ul style="list-style-type: none"> <li>Types of problem associated with the current CBS</li> </ul>                          | <ul style="list-style-type: none"> <li>One extracted report on call statistics (from May, 2012 to May, 2013)</li> </ul>   | To use as a measure of the current CBS's quality  |
| Quality control data   | <ul style="list-style-type: none"> <li>Information about defects found in the current CBS</li> </ul>                        | <ul style="list-style-type: none"> <li>One extracted report on errors logged during business transactions (from May, 2012 to May, 2013)</li> </ul>  |   |
| Annual financial reports                                     | <ul style="list-style-type: none"> <li>Information about the market, competition, and organisational performance</li> </ul> | <ul style="list-style-type: none"> <li>Three recent annual financial reports (from 2010 to 2012)</li> </ul>   | To provide background and understand internal and external influences on the necessity of upgrading CBS |
| External data (i.e., publications, newspapers, and journals) | <ul style="list-style-type: none"> <li>Information involving the organisation's CBS</li> </ul>                              | <ul style="list-style-type: none"> <li>Eight local and international newspapers; seven white papers from the vendors; two publications from international financial institutions</li> </ul> |   |

#### 4.3.2. Informal discussions with IT staff

Unlike traditional research, the data generation in an AR also comes through active involvement in the daily organisational processes relating to the AR project. In other words, an AR can include all types of data gathering methods in “formal settings” (e.g., meetings) or “informal settings” (e.g., discussions over coffee or lunch) (Coughlan and Coughlan, 2002: 99). In the present study, although I engaged in the CBS upgrading project with some pre-understandings of the problem under investigation, I realised that it is necessary to retain an awareness of the importance of the staff's understandings of it. As Coughlan and Brannick (2005) cautioned, it is usually a pitfall when action researchers believe that they fully understand their own contexts but in fact their perspectives are only partial. In order to familiarise myself with the context, I also had dozens of informal discussions with IT staff (e.g., IT Department Director, Software Test Analyst and Engineering Manager) during the diagnosing phase, ranging from brief exchanges to long conversations over coffee or lunch. The content of these conversations varied broadly from general (e.g., the process of formation and development of the proposed CBS) to specific topics (e.g., the obstacles they have faced, the merits and drawbacks of the current CBS). Similar to some characteristics of unstructured interviews, I approached each conversation

only with the study's purpose in mind that I would like to discuss and generated questions in response to the staff's narration. In this regard, I saw myself as the research instrument, in that there were no predefined questions to structure the inquiry (Ritchie and Lewis, 2008). Given the fact that I did not know in advance how each conversation flowed and which conversion could give me additional useful information, I only took brief notes for any valuable conversation and wrote up more detailed notes in my research journal later on the same day as recommended by Bell (2005).

### **4.3.3. Semi-structured interviews**

As the diagnosing phase aims to focus on investigating the staff's experience on the current CBS and their perceptions toward the upgrading project, using naturally occurring techniques such as direct observation is unable to get at the motives behind their resistant attitude because the attitude of concern is usually imputed by many unobservable reasons (e.g., participants' mood). Other problems facing the observational technique are unethical and immoral, especially in the banking context. Thus, interactional techniques (e.g., in-depth interviews, focus groups) are seen to be more appropriate at this phase. The merits and drawbacks of each interactional technique are carefully considered below.

Based on the suggestion of Finch and Lewis (2008), focus groups seem to be more effective than in-depth interviews because the major causes of resistance toward the CBS upgrading project are easier to be identified and interrogated by members in a group themselves and by sharing experiences of others as well as reflecting on what others say. Besides that, the focus groups technique gives participants a direct and explicit opportunity to convey their own meanings and interpretations through the explanations they provide and interact with group members, whether spontaneously or in answer to the researcher's questions (Gummesson, 2005). Such group dynamic and group interaction (e.g., interruptions, agreements and/or disagreements) could also be seen as a part of the data and could be analysed at the group level of analysis (Hesse-Biber and Leavy, 2010). On the other hand, if one-to-one interviews are used, the interviewees will not always be challenged because I do not have sufficient

insight or experience for a variety of issues generated from the implementation of a new CBS. This is further explained by Bryman and Bell (2007) who suggested that interviewees in conventional one-to-one interviewing usually do not say things that are consistent with earlier replies and the researcher is often reluctant to point out such deficiencies, but in the context of focus group, individuals will often argue with each other and challenge each other's views so that the researcher probably stands a chance of ending up with more realistic accounts of the subject matter. Given that, the answers generated by qualifying or modifying one's views with each other can be more interesting than the question-followed-by-answer approach of normal interviews.

Despite the fact that choosing focus groups technique can generate better answers, it has been argued by a number of researchers that group interaction can also be a major disadvantage for focus groups because it probably inhibit the exchange of opinions and ideas from the minority (Ritchie and Lewis, 2008), for the topic involving lack of self-efficacy to use the new system (Klaus and Blanton, 2010), or for identifying causes of resistance which are due to the conflicts of interests associated with the IS change (Meissonier and Houze, 2010). Last but not least, because all participants are in full-time employment there is little opportunity for them to physically attend in focus groups. In other words, it is difficult to persuade participants to turn up at a particular time. Due to these major disadvantages, using in-depth interviews are gauged to be better than using focus groups at this stage.

As resistance to IS change has never been studied from a multilevel perspective (i.e., individual, group and organisational level), there is no prior assumption about the nature of the process can be made. The only exception is the study conducted by Lapointe and Rivard (2005) which allows for a multilevel analysis. Adopting their bottom-up process by which individual resistance behaviours emerge into group resistance, I assumed that the opinion of director of each department or each banking branch would represent the convergence of individual member's shared perceptions and responses. In this case, personal interviewing of their opinions can be used to investigate the group or even organisational issues leading to resistance. This approach to data collection is similar to the view of what was called "methodological individualism" discussed by Yurdusev (2012: 125) who, with reference to Watkins

(1968), insisted that “the individual is not only methodologically, but ontologically prior to the collectivities”. Consequently, as he argued, it is possible, or even feasible in social sciences, to view the individuals’ opinion from the stand-point of collectivities (e.g., group or organisational level of analysis) because they are “the only moving agents”.

In order to allow for information to flow in both directions instead of using the question-followed-by-answer approach of normal interviews, a series of semi-structured interviews were conducted at multiple levels of organisational hierarchy covering two pools of interviewees. The first pool consisted of department directors and branch directors. Meanwhile, the second pool included experienced CBS employees, who are from different departments or branches associated with the first pool and have at least two year working experience at the case organisation. The latter criterion for selecting participants in the second pool was based on the fact that the first announcement of the upgrading project was made in 2011 and that it takes average 6 months for new staff to get used to the CBS. The purpose of using this purposive or criterion-based sampling is to ensure the richness of information collected (Ritchie and Lewis, 2008).

Participants in the first pool were interviewed first because they present the key IS decision makers and their insights into the current resistance problems are the basis for further inquiry. After each interview, the participant was asked to suggest his/her followers within the associated department or banking branch. This sequence of interviewing demonstrates that the study is supported by top leaders, which consequently helps me to gain more support and trust from followers in the second pool.

Although there is no strict requirement for the sample size in qualitative research, Bryman and Bell (2007) suggested that twelve interviews are usually necessary for information saturation that is achieved when no new information is uncovered. Yet, they further added that it is necessary for a movement backwards and forwards between sampling and reflection on findings to see whether the saturation occurs or not. For the second pool of interviewees, I expected to obtain new information within the first twelve interviews according to the above suggestion. It appeared that this was the case later on. The following six interviews only confirmed the information



and they did not provide any new information. However, whereas the information saturation was achieved in the second pool of interviewees, it was probably not the case for the first pool of interviewees for two reasons. First, only department where its operations are related to the CBS was considered in the study for the relevant purpose. Second, because the upgrading project of the CBS could be seen at a very early stage where the contracting process with the appropriate vendor has not been done and the proposed system has not been installed yet, only a small number of management directors were involved in the project. As discussed with the CEO, they include three department directors (i.e., IT, Finance, and Marketing department) and two branch directors (i.e., those from the branches which are often chosen for testing any IS project). A full attempt was made to include these directors and all of them agreed to participate in the study. Given the fact that a high number of interviews are not strictly required in face-to-face interviews as compared to other quantitative methods (Bryman and Bell, 2007; Creswell, 2008; Ritchie and Lewis, 2008), it was decided that a total of twenty-three interviews (i.e., five directors and eighteen associated operational staff) covering different levels in the organisational hierarchy were sufficient. The sample details are shown in Table 4.2 below.

**Table 4.2: The sample details for semi-structured interviews at the diagnosing phase**

| Position                          | Pseudonym | Years of Experience |                  |
|-----------------------------------|-----------|---------------------|------------------|
|                                   |           | AlphaBank           | Banking Industry |
| 1. IT Department Director         | QUD       | 6                   | 10               |
| 2. CBS Administrator              | HIA       | 5                   | 5                |
| 3. System Analyst                 | TRA       | 6                   | 6                |
| 4. Technical Manager              | SOM       | 4                   | 9                |
| 5. System Development Officer     | TRO       | 4                   | 4                |
| 6. System Operation Officer       | VUO       | 6                   | 6                |
| 7. System Operation Officer       | MIO       | 5                   | 5                |
| 8. Finance Department Director    | VID       | 3                   | 10               |
| 9. Foreign Exchange Officer       | THO       | 4                   | 4                |
| 10. Marketing Department Director | MAD       | 6                   | 6                |
| 11. Branch Director               | TID       | 3                   | 15               |
| 12. Branch Director               | TRD       | 4                   | 6                |
| 13. Transaction Controller        | NGC       | 3                   | 8                |
| 14. Credit Controller             | THCC      | 2                   | 6                |
| 15. Cashier                       | THC       | 2                   | 2                |
| 16. Loan Officer                  | OAO       | 2                   | 2                |
| 17. Loan Officer                  | ANO       | 2                   | 2                |

|                                     |     |   |   |
|-------------------------------------|-----|---|---|
| 18. Credit Analyst                  | DUA | 3 | 3 |
| 19. Credit Analyst                  | LYA | 2 | 2 |
| 20. Teller                          | NGT | 2 | 2 |
| 21. Teller                          | THT | 3 | 3 |
| 22. Customer Service Representative | VAC | 2 | 2 |
| 23. Customer Service Representative | ANC | 2 | 2 |

Even though the exploratory nature of the diagnosis stage means that it is necessary to achieve both breadth and depth across key issues, it cannot be so unstructured that I cannot at least specify my research focus. In this regard, an interview guide was developed accordingly to the relevant literature about the reasons for resistance to IS change in Chapter 2. Table 4.3 will present the main sections of the interview guide and the reasoning for these sections. A full detail of the interview guide (both Vietnamese and English version) can be seen in Appendix F. Sub-questions that were not included in the guide might be asked as needed when I needed more clarification of provided information. In order to avoid the case that the research questions are so specific that alternative avenues of enquiry that may arise during the data collection are closed off, I decided to mainly ask “open-ended” questions (e.g., How, What, Why) to give the participants opportunity to address their individual perspectives and meaning concerning the topic. The consideration for not using leading questions was also taken into account at this stage as suggested by Ritchie and Lewis (2008).

**Table 4.3. Contents of interview guide and justifications**

| <b>Part/Section</b>                       | <b>Objectives/Reasoning</b>  |
|---|--|
| <b>Opening section</b>                    | <ul style="list-style-type: none"> <li>• To provide background information about the study and its purpose.</li> <li>• To discuss about confidentiality, consent form, and data protection agreement.</li> <li>• To explain the participants’ rights in the research.</li> </ul> |
| <b>Section 1 - Biographical questions</b> | <ul style="list-style-type: none"> <li>• To gain information needed for grouping the participants.</li> <li>• To give the participants time to talk about something common to make them feel relax and comfortable with the situation.</li> </ul>                                |

|   |  |
|---|--|
| <p><b>In-Analysis:</b></p> <ul style="list-style-type: none"> <li>• <b>Section 2</b></li> <li>    _ <b>Question 2.1</b></li> </ul>  | <ul style="list-style-type: none"> <li>• The content of the question was based on key external variables discussed by Scott (2003). <ul style="list-style-type: none"> <li>_ To investigate possible environmental factors leading to resistance to IS change at the AlphaBank.</li> </ul> </li> </ul>   |
| <ul style="list-style-type: none"> <li>• <b>Section 3</b></li> <li>    _ <b>Question 3.1 – 3.5</b></li> <li>    _ <b>Question 3.6 – 3.7</b></li> <li>    _ <b>Question 3.8</b></li> <li>    _ <b>Question 3.9 – 3.13</b></li> <li>    _ <b>Question 3.14</b></li> <li>    _ <b>Question 3.15</b></li> </ul> | <ul style="list-style-type: none"> <li>• The content of these questions were mainly based on Weisbord’s (1976) diagnostic questions. <ul style="list-style-type: none"> <li>_ To investigate the purposes of the CBS change project and examine whether the purposes were clear, and whether they were understood and bought into by the employees.</li> <li>_ To investigate the way how the work relating to the project got divided up, and whether it made sense given the purposes.</li> <li>_ To investigate whether a formal reward system existed and whether employees felt as if their contributions were rewarded accordingly.</li> <li>_ To examine what helpful mechanisms existed to facilitate the CBS change and how well they met their objectives.</li> <li>_ To explore the level of consensus within the top management about the project and examine if there was any conflict.</li> <li>_ To investigate whether there was an appropriate leader for the upgrading project.</li> </ul> </li> </ul> |
| <ul style="list-style-type: none"> <li>• <b>Section 4</b></li> <li>    _ <b>Question 4.1 – 4.2</b></li> </ul>   | <ul style="list-style-type: none"> <li>• The content of these generic questions were based on Lapointe and Rivard (2005) to reflect the natural nature of group conflicts which is situation-dependent. <ul style="list-style-type: none"> <li>_ To investigate which group of employees was affected by the CBS change and explore how and why they were affected.</li> </ul> </li> </ul>   |
| <ul style="list-style-type: none"> <li>• <b>Section 5</b></li> <li>    _ <b>Question 5.1 – 5.4</b></li> <li>    _ <b>Question 5.5 – 5.6</b></li> </ul>  | <ul style="list-style-type: none"> <li>• The content of the questions in this section were mainly based on Samuelson and Zeckhauser’s (1988) concept of status quo bias and Joshi’s (2005) categorisation of changes in outcomes and inputs on account of implementation. <ul style="list-style-type: none"> <li>_ To investigate how the participants appraised the consequences of switching from the current CBS to the new one (e.g., costs and benefits associated with the switching including the impact of past resource investment and control they felt they had over the new technology).</li> <li>_ To examine the impact of cognitive misperception of loss aversion on their decisions.</li> </ul> </li> </ul>   |

|   |  |
|---|--|
| <p>_ <b>Question 5.7</b></p> <p>_ <b>Question 5.8</b></p> | <p>_ To explore the effect of social norms or colleagues' opinion on their decisions.</p> <p>_ To investigate the overall effect they perceived the CBS change had on them.</p>  |
| <p><b>Closing section</b></p>                             | <ul style="list-style-type: none"> <li>• To ask for any additional comment that the interviewee feels has been unsaid.</li> <li>• To ask for any advice on lessons learned from the change process.</li> <li>• To ask for suggestion for future appropriate interviewees (only used for managerial positions).</li> <li>• To thank the interviewee for his/her participation.</li> </ul> |

Before applying the interview guide in the fieldwork, it was sent to both the bank's top management and my research supervisors for checking relevance and meaning difficulties as discussed in Section 3.6. Once both the CEO and IT department director agreed that there was no sensitive question and that the participants would not be harmed by the research, the CEO wrote a personal letter to all other directors involving the CBS upgrading project via the intranet to inform them about my research and ask them for their participation. Further contacts with each director were directly organised by me via email and telephone, in which I explained my current research and its general purposes. Because every director within the organisation was very busy to accomplish their daily tasks, the appointments were mainly set by them. The sequence of interviewing was carried out as discussed previously.

Prior to each interview, the interviewee was explained and asked to sign the consent form, which ensures the anonymity and confidentiality of the information as well as informs him/her in advance about the approximate length of the interview. Previous qualitative researchers (e.g., Cassell and Symon, 2004; Patton, 2002; Ritchie and Lewis, 2008) also suggested that each interview session should be audio-recorded so that the researcher can pay his/her full attention to listening to the interviewee and probing in-depth. In order to obtain permission to audio-record, I took couple of minutes at the start of each interview to reassure about confidentiality and provide a clear, logical explanation about the purpose of using an audio-recorder (e.g., only use for the research purpose, difficult for me to remember a large amount of information). The interviewee was also assured that the recorder could be turned off

at any time they wanted it to be. In the present study, all twenty-three interviewees had no problem to be audio-recorded.

The interviews were mainly held in the quiet meeting room of each department or branch during working time. Therefore, any feeling of restriction or uncomfortableness was avoided. Without non-recorded conversation both before and after each interview, the recorded interviews varied between thirty minutes to one hour and they are very dependent on the interviewee's position and responsibilities in the organisation. The only exception is the interview with IT department director, which lasted for two hours. In total, an approximately nineteen-hour record was generated. All interviews were later transcribed by me to ensure confidentiality and that every pause or non-communication was noted. It took an estimated six hours to transcribe one hour of interview. The total length of the transcription is 99,904 words.

#### **4.4. Action planning and taking phase**

Considering the next logical step, it was clear that beside integration of management, there must be a concrete action plan that would enable quick resolution as the AlphaBank was facing a lot of pressure from resistance to its CBS project. Hence, this phase aims to identify and apply appropriate change management strategies to solve the major causes of resistance identified during the diagnosis phase (Research Question 2.1 and 2.2). The activities within this phase included one brainstorming session with the bank's top management, one separated meeting with the CEO and one workshop with the project team. The total number of participants in this phase was seventeen people as in Table 4.4.

**Table 4.4: The sample size at the action planning and taking phase**

| Activities                                  | Position                          | Pseudonym |
|---|-----------------------------------|-----------|
| <b>Brainstorming session with the board</b> | 1. Chief Executive Officer        | DUT       |
|   | 2. IT Department Director         | QUD       |
|   | 3. Finance Department Director    | VID       |
|   | 4. Marketing Department Director  | MAD       |
|   | 5. Accounting Department Director | PHD       |
|   | 6. Human Resource Director        | THD       |
|   | 7. Retail Banking Director        | LUD       |
|   | 8. Corporate Banking Director     | TOD       |
| <b>Personal meeting with the CEO</b>        | 1. Chief Executive Officer        | DUT       |
| <b>Workshop with the project team</b>       | 1. IT Department Director         | QUD       |
|   | 2. Finance Department Director    | VID       |
|   | 3. Marketing Department Director  | MAD       |
|   | 4. Branch Director                | TID       |
|   | 5. Branch Director                | TRD       |
|   | 6. Technical Manager              | SOM       |
|   | 7. Operation Manager              | PHM       |
|   | 8. CBS Administrator              | HIA       |
|   | 9. System Analyst                 | TRA       |
|   | 10. System Development Officer    | TRO       |
|   | 11. System Operation Officer      | VUO       |
|   | 12. System Operation Officer      | MIO       |

**Total: 17 Participants**

This phase was allocated in the time period between December, 2013 and May, 2014. My role during these activities can be classified as “participant as observer” in Saunders et al.’s (2009: 294) typology of participant observation researcher roles. Specifically, I took part in these activities as a facilitator and the participants knew about me (e.g., a researcher) as well as the reasons for my attendance. Given that, in order to avoid any risk of making the research findings at this phase too one-sided or even distort (e.g., through my own experience and personal perspective), I always reflected on my conduct with the participants at the end of each activity (e.g., via brief conversation for their feedbacks). Additionally, when taking the role as participant as observer, Waddington (2004) suggested that the researcher should maintain a positive and non-threatening self-image. Therefore, building a relationship of trust and avoiding my influence during the participants’ decision making process was always the primary of my focus. The data generated during this phase were all recorded by an audio-recorder with the participants’ permission and

by taking field notes. Furthermore, short discussions about confidentiality consent form and data protection agreement were also held prior to each activity. The design and procedure of each activity is discussed in turn in the following sections.

#### **4.4.1. Brainstorming session with the bank's top management**

Brainstorming is considered as one of the creative techniques available for idea generation and is by far the most used by practitioners and organisation development researchers (Herring et al., 2009). Hender et al. (2001) further explained that the purpose of this technique is always to figure out as many solutions as possible for problem solving. According to them, three main steps of this technique include the establishment of common ground on the problems, the generation of ideas by free association and continuous generation of ideas using other ideas generated as stimulus. Thus, this technique follows a participatory, inclusive and open process between the participants and the fact that it regards the “unfreezing” stage in Lewin’s action research tradition (Robbins, 2003). According to these characteristics, this technique was deemed to be appropriate at this phase.

I, in coordination with the management board, therefore decided to plan a brainstorming session to develop a common understanding on the issues of resistance between them, and to figure out an action plan for the further CBS change process. Since this activity focused on the key decision makers in the organisation, their primary areas of concern, and the desired future state of the project, I began with the bank’s top management that became the group for brainstorming. Moreover, the CEO also agreed that he wanted to work with different directors at the same time and that he wanted to create an atmosphere in which the participants could discuss the issues associated with the project frankly and critically. The brainstorming session was planned and took place at the beginning of January, 2014. It was held in the conference room, equipped with a projector and a video screen, at the AlphaBank’s headquarter. To consider different views, the group included seven directors (i.e., IT, Marketing, Finance, Human Resource, Accounting, Retail Banking, and Corporate Banking Department) and the CEO. Because verbal brainstorming group should experience synergy that increases as group size increases, but not too large to

monitor, the group size of eight members was seen as sufficient and in fact equal to the ideal size suggested by Paulus and Nijstad (2003).

Since it was difficult to set the time and place for a meeting with all the participants at once, the CEO decided to plan the brainstorming session after their regular meeting about important issues beside the CBS project. Hence, it was early afternoon before a start of the session could be made with the topic “How to deal with resistance to the CBS change”. Unlike the diagnosing phase where I played a more conventional role which positioned me as an external researcher (e.g., who consulted the organisational participants, decided primary oversight of the research design, data collection and analysis), I switched to a more collaborative role at this phase to share the research responsibilities while leveraging the different knowledge of the researcher and subjects (Coghlan and Brannick, 2005). Under this mode, data collection and analysis become tightly interwoven. In other words, data were co-created and analysed as the research context fostered “moments of dialogue” (Reason and Bradbury, 2001: 24). Through collaboration, we sought to unpack the “black box” of resistance to CBS change.

The brainstorming session was organised to include three sub-sessions. Because there is a danger that the change management strategy can be considered as a separate entity in itself (Pugh, 2007), the first sub-session was to re-introduce my research and present the findings at the diagnosing phase so that the participants could find a common ground on the issues and develop the action plan accordingly. The ethical issue involving a potential risk that the bank’s top management might recognise the response providers since they all work for the same organisation was carefully considered (see Section 3.7). The second sub-session was called “resistance sense-making”. Weick (1995: 4) explained that “sensemaking” is the process of “structuring the unknown” by placing stimuli into some kind of framework that enables us to “comprehend, understand, explain, attribute, extrapolate, and predict”. In other words, it is the activity that allows us to turn the circumstances into “a situation that is comprehended explicitly in words and that serves as a springboard into action” (Weick et al., 2005: 409). As discussed previously in Chapter 2, whereas some previous researchers (e.g., Bhattacharjee and Hikmet, 2007; Klaus and Blanton, 2010) considered resistance as negative sources



which need to be overcome or eliminated, others (e.g., Meissonier and Houze, 2010; Ford and Ford, 2009) argued that resistance should be seen as a building block for the practitioners to re-consider whether the change is favourable or not. Thomas and Hardy (2011) further explained that negative reactions to change may be motivated by positive intentions and that they can make an important contribution to change through the practitioners' questioning of the change. Under this perspective, the goal of the second sub-session was to enable and examine the participants' resistance sense-making. Similar to the first step of Lewin's (1947) unfreezing stage, this sub-session served to unfreeze the existing situation or status quo as well as build trust and recognition for the need to figure out the resolution actions.

The purpose of the "resistance sense-making" sub-session was also to establish "change readiness" which has been suggested by most scholars as one of the key factors in determining whether a given change intervention will be successful or not (e.g., Armenakis and Harris, 2009; Kwahk and Kim, 2008). According to Stevens (2013), simply reducing resistance does not guarantee active efforts on the part of change recipients in support of change, but only in lessening potential resistance behaviour. In other words, the role of the change agents is to also influence "the belief, attitudes, and intentions" rather than "the behaviour of change recipients" toward positive and active participation in the change effort (p. 335). In contrast to prior research which assumes that once readiness is established it is sufficient to guide change-supportive responses through a change implementation, this study is in line with the argument made by Stevens (2013: 351) that subsequent events may create "breaks" that require the change recipients to reassess prior evaluations of the change, and that whether some prior evaluation of the change still holds or must be revised. In the study under investigation, for example, significant changes in the external environment may bring into question whether an initial evaluation of business priorities and market conditions is still accurate. Thus, it is required to reassess the event, using information from individual, contextual, or collective sources before determining a response profile.

In terms of my preparatory work for this sub-session, I used the technique of Force Field Analysis suggested by Lewin (1951) to provide new insights into the evaluation of the CBS project. However, instead of dividing the forces associated

with the CBS change into driving forces and restraining forces, I decided to break them into four components (i.e., “enablers”, “blockers”, “changing”, and “not changing”) to provide the bank’s top management with a broader and deeper picture of the CBS project. In this case, the driving forces were a sum of “enablers for changing” and “blockers for not changing”. Meanwhile, the restraining forces were reflected via “enablers for not changing” and “blockers for changing”. During this sub-session, I played a role as facilitator. Prior to the “resistance sense-making” sub-session, a short animation movie about *Overcoming resistance to change – Isn’t it obvious?* (2010) was shown and a half-hour exercise was allocated for this sub-session. The participants were then asked to: 1) Use different lenses – not their own lens – to see the issues; 2) Consider not only the enablers and blockers for “changing” but also for “not changing” the CBS; 3) Make their decision on “go or no go” for the CBS project. A simple scoring mechanism, such as using vectors with the field strengths (Lewin, 1951) or rating the importance of each force (Cagle, 2003), was not applied at that time for two reasons. First, we tended to focus on the qualitative assessment rather than its counterpart. Second, a large number of restraining forces, for instance, might not be as important as a short list of driving forces. One possible solution for this issue is to put a weight (e.g., using a rating scale) into each force for the evaluation. However, the problem is that an important force needs not follow its weight. This may indeed happen if one force has very few recognition among the participants, but very severe. For instance in the re-evaluation of Lewin’s (1951) work, Cronshaw and McCulloch (2008: 92) figured out that the simplistic approach used in force field analysis is a static analysis of “observables” that is not nearly up to the task of assessing “intangible field forces” operating over an extended period of time. Given that, we decided to leave the numbers out completely and focus on the impact each force has. I then summarised the responses on a big blank paper and discussed to make sure that there was a consensus agreement that the CBS change is still favourable and unavoidable.

The last sub-session was to brainstorm as many proposed actions as possible to amend the causes of resistance accordingly. Prior to this sub-session, I began by explaining five brainstorming rules, as suggested by Hargadon and Sutton (1997), to the participants: 1) Defer making judgement; 2) Build on the ideas of others; 3) One conversation at a time; 4) Stay focused on the topic; 5) Encourage wild ideas. None

of the participants had any problem with these rules as they had got extensive experience as participants in brainstorming before. A table of resistance items, which had been identified during the diagnosing phase, and a blank table for filling proposed actions were designed in advance and displayed on the screen. Hence, the participants could stay in the track of solution development and the proposed actions could be typed directly on the template. Again, I played a role as a facilitator in which Schien's (1999) confrontive inquiry was applied to challenge the participants to think from a new perspective on their current practice (e.g., Have you thought about establishing internal communication channels?; Have you considered that adjusting the earning and bonus system might be a solution?). The advice on lessons learned from the change process generated from twenty-three interviewees during the diagnosis phase (see Section 4.3.3) was used at that time to help me build up the content of these inquiries. Consequently, a "resistance-action" list was generated. This list was long and very detailed (22 resistance items and 33 proposed actions). The proposed actions were then evaluated and prioritised by asking the participants to determine: 1) The degree of importance among resistance items; 2) The degree of effectiveness of each associated action. The priorities were based on both quantitative (e.g., by counting the votes) and qualitative assessment (e.g., the consequence of the resistance item in question, the effect of the proposed actions). The participants were also asked to account for and reconcile their differences. In other words, while the voters were asked to explain their choices, the non-voters were asked to explain their disagreement with others. The benchmark for deciding the priorities was based on the point value of five among eight participants (excluding me because I did not want to have any effect on their decisions). As the outcome, the proposed actions were slightly reduced to 31 priorities. However, the problem was that not every priority could be implemented due to the difficult cash-flow and resources constraints. Therefore, we all agreed that the "Think-Feel-Do" model, developed by Lavidge and Steiner (1961) and adopted by others (e.g., Aladwani, 2001) to set up strategies that can best overcome users' resistance; could be used in this case to provide a good framework for assessing which priority would be taken first. According to the model, the change actors appear to process through cognitive (thinking), then affective (feeling) and finally conative (intention/doing) stages. It is then best to first try to affect the cognitive component of the actors' attitudes. At the end of the brainstorming, the CEO suggested that a report of the

brainstorming could be useful for him before making his decision on the prioritised actions. Therefore, a separate meeting with him was organised. In total, the brainstorming session lasted for nearly three hours.

#### **4.4.2. Meeting with the CEO**

A half an hour meeting with the CEO was organised and took place one week after the brainstorming session at his office. This was an intermediate activity in the sense that its purpose was about synthesising the brainstorming session and getting the CEO's approval on the prioritised actions identified.

In terms of action taking, my contribution was establishing the “abstract” list of resistance items and proposed actions. Previously in the brainstorming, both the bank's top management and I explicitly agreed that there was a need to provide an overview through development of abstract categories of resistance items and abstract categories of proposed actions because the “resistance-action” list was too long, difficult to interpret, and did not provide strategic oversight. Compared to the “resistance-action” list, the “abstract” list could be difficult for minor revisions of specific resistance items and/or proposed actions but it would provide us with an overall understanding of causes of resistance (at the aggregate level) directly related to strategies (in terms of aggregate proposed actions). Regarding this concern, I studied organisational change management in the literature with the aim to identify a set of comprehensive and workable strategies (not strategic options) which could be applied in this context. A key challenge was that most of previous research focused more on specific proposed actions or strategic options rather than general strategies to manage resistance to change (e.g., Hong and Kim, 2002; Klaus and Blanton, 2010). The first exception is the work of Kotter and Schlesinger (2008) in which they attempted to categorise methods for dealing with resistance into six general approaches (i.e., communication, participation, facilitation, negotiation, manipulation, and coercion). The second exception is the research conducted by Shang and Su (2004) in which they suggested four different change management styles (i.e., direction, participation, consultation, and coercion) and these are, in fact, a short version of Kotter and Schlesinger's (2008) classification. By adopting the

work of Kotter and Schlesinger (2008), my initial attempt to build up the “abstract” list was challenged as their categories do not account for external environment and its effect on internal capabilities. Further development through a detailed examination of proposed actions mentioned in the literature (e.g., Iversen et al., 2004; Johnson et al., 2005; Mento et al., 2002; Pugh, 2007) as well as reviewing the “resistance-action” list identified during the brainstorming helped me develop six overall strategies (i.e., timing, communication, participation, facilitation, negotiation, and manipulation strategies) (see Section 5.4.1 for details).

Meanwhile, the development of higher-level abstract categories of resistance items was based on four different areas, also representing different level of analysis (i.e., individual, group, organisational, and external environmental level), in which the practitioners might identify the causes of resistance:

- ***External constraints:*** *Threats from the external environment which could have an impact to a greater or lesser extent on the organisational implementation of the new IS system.*
- ***New IS misalignment:*** *Misalignment or unfit between the organisational elements (e.g., purpose, structure, reward) and the new IS system.*
- ***Conflict of interest:*** *Political struggles or an imbalance distribution of intra-organisational power and resources generated during the new IS system implementation.*
- ***Status quo bias:*** *The bias or preference to stay with the current situation (both rational and irrational aspects).*

Finally, I designed the strategy sheet based on both the “resistance-action” list and the “abstract” list and used the “Group Sum” to represent the degree of agreement among the bank’s top management. “Reasons for agreement”, “Reasons for disagreement”, and other comments were also entered into the template as the summary of the qualitative assessment and reflected in the “Advantages” and “Drawbacks” columns (see Section 5.4.1 - Table 5.3 for details). On the basis of the strategy sheet, the CEO agreed to cover firstly third of the prioritised strategies, focusing on the cognitive component of the change recipients’ attitudes, as discussed

previously in the brainstorming session. Another meeting with relevant department directors who would be responsible for performing these strategies was subsequently held by the CEO. Meanwhile, he expressed that winning over the project team and helping them to manage resistance would be fundamental to the success of the project. Therefore, a workshop with the project team was later planned and designed.

#### **4.4.3. Workshop with the project team**

In accordance with the importance of the project team on the success of the project, this workshop was set to: 1) Offer the rest of them the same information as the bank's top management had (i.e., the findings at the diagnosis phase, the top management's commitment on the "go" decision); 2) Create a personal concern about their responsibility to support the CBS change and act as resistance aware during the project; 3) Present them the strategy sheet which could be applied in their particular context. The participants in this activity included the entire project team (i.e., five directors, two managers, and five technical staff). Such full meeting also meant that they had space for discussion and opportunity to express their expectations on the resistance management approach.

The meeting took place on the 22<sup>nd</sup> of January 2014. The entire project members were invited by the CEO via email although he could not attend the meeting due to his arranged appointment. The meeting lasted for nearly one hour and closed with consideration of what would be their next activities, according to the results of the brainstorming session with the top management. Again, I joined the workshop as facilitator and, therefore, I adopted the role as participant as observer (Saunders et al., 2009). During the meeting I made notes as the project team's discussion developed and after the meeting I recorded their feedback on the approach for managing resistance.

With this meeting, the action planning and taking phase was finished. In other words, I presented the approach but I let the practitioners themselves apply the process, assisting only when they got stuck. At the end of this phase, both the board of management and the project team were informed about the importance of the CBS

project, the prioritised strategies, and specific associated actions for managing resistance.

The next phase (the evaluation phase) started with an interpretation of how the practitioners applied the strategy sheet in their particular context, which actions had been taken later by them to manage resistance toward the CBS project, and what were the outcomes of those actions. As discussed with the CEO, three months seemed to be a reasonable time frame before starting the evaluation phase so that the practitioners had time for executing the prioritised actions. Moreover, the three-month time period also seemed to coincide with the formal end of my two-year action research project.

#### **4.5. Evaluation phase**

Reviewing the proposed solutions and insider perspectives were critical to the theory-building of a research (Street and Meister, 2004). This phase started in June, 2014 (approximately four months after the implemented activities were on the ground) and the final report was submitted to the AlphaBank in the late of July 2014. In this phase, I sought to investigate the outcomes of the resolution actions which had been taken later by the practitioners to manage resistance toward the CBS project (Research Question 2.3). In other words, this phase aims to explore whether the effects of the resolution actions were realised as planned and whether these effects released the staff's resistance. Based on the findings of this phase, it could be decided whether an additional research cycle needs to be proceeded if the outcomes are negative.

Prior to this phase, one challenge was that the practitioners (who had been assigned and responsible for performing the priorities strategies) might perceive threat because the use of evaluation results subsequently led to the judgement of their performance. In this case, Love (2004) suggested that experienced evaluators should adopt a participatory approach by involving them as partners rather than research objects in the evaluation process. According to him, a partnership is essential since the external evaluators must rely on the internal implementation evaluators to collect accurate data and supply crucial information (e.g., program descriptions, outcome

metrics). Moreover, as Eason (2005) added, the internal implementation evaluators are also often the best people because they have lived through the intervention and they can give evidence about the way in which overall effects have come about. Given that, the evaluation phase was subsequently performed with two practitioners (i.e., IT Department Director and Marketing Director) responsible for improving project management and both were skilled project directors with experience in technological transformation or strategic change management. The interviewing technique was used to obtain their feedback on issues, patterns, and meanings that they had identified by scrutinising the intervention data (e.g., their observation notes or records of feedbacks received from their followers). The focus group technique was not considered because of their busy daily tasks. My role during this phase was to combine identified patterns, pose alternative explanation, and craft a more integrative framework. Since I took a role as an indirect evaluator in this phase, the small sample size was not an issue (Luscher and Lewis, 2008). However in order to enhance the validity of the findings and avoid the problem associated with the sampling bias (e.g., the assessments were mainly based on the directors' perspectives), both practitioners were asked for relevant hard indicators (e.g., number of participants in the IS change programme, number of feedbacks or complaints) as evidence to support their assessments as suggested by Popova and Sharpanskykh (2010). These two sources of evidence (i.e., soft and hard indicators) were later used to triangulate the research findings in this phase (Yin, 2009). Moreover, the purpose of using both soft and hard indicators was also to take into account the process evaluation as well as the outcome evaluation. According to Glasgow and Linnan (2008: 490), "process evaluation [by using soft indicator] measures the extent to which an intervention was delivered or implemented as intended". This type of evaluation is therefore essential for answering "how" and "why" interventions may have been effective (or ineffective). As a result, it can help tease out negative outcomes and can help expand understanding of positive outcomes. On the other hand, "outcome evaluation [by using hard indicators] seeks to document program effects" and, thus, provides the basis for answering "whether" such interventions may have been effective or not.

Another challenge that we faced prior to this phase involved the question of what hard indicator could be used as a primary outcome indicator for measuring the



overall impact of our interventions. In this study, the answer for such question became more difficult since the main purpose of our interventions was to help the bank's members to think differently and act differently. As Cooper (2005: 474) argued, "while some gains are measureable, who can put a value on the opportunity to work for something you believe in? Or estimate the psychological impact of witnessing your words move and motivate people to join you in an attempt at change?". Hence, this is often the reason why assessing the impact of communication and participation has been rarely done in a business change (Klewes and Langen, 2008). Nonetheless, after a discussion with the practitioners involved, we decided to choose the level of engagement for a number of reasons: 1) Because the purposes of our interventions were not only to change the staff's thinking but also to encourage their participation or engagement as an effective way for developing a better implementation plan and managing risk associated with the change; 2) Because we all agreed that managing resistance not simply involved removing its sources but required making sense of them, especially for functional sources of resistance (e.g., loss of important operational modules); and 3) Because we realised that moving our staff away from the "denial stage" would lead them to the "awareness stage" instead of the "acceptance stage" as illustrated in Adam et al.'s (1976) personal transition curve model (see Section 2.2.4.4) and, therefore, other choices for measuring the impact of our interventions such as employees' satisfaction with the change (e.g., Erdogan et al., 2008; Meissonier and Houze, 2010) or their commitment toward the change (Lowe, 2007) were considered as not reasonable at that time. In this case, as defined by Carnall (2007: 279), "engagement refers to attempts to get either feedbacks or ideas...[that] we seek to stimulate thinking about the changes". Thus, engagement could be seen as a sign of thoughtful adoption of an organisational change (Ford et al., 2008).

In order to arrange this evaluation phase, contacts via email with both the CEO and these two directors were made to ensure that the time frame between the action taking phase and the evaluation phase was long enough to evaluate the effects of the resolution actions. The appointments for interviewing were mainly set by them later on. Online face-to-face interviews which took place in synchronous mode using Skype, an online communication tool, were conducted. The reason for choosing online face-to-face interviews was due to distance problems between the target

participants and me. Moreover, since both participants knew about me as well as the reasons for my research, direct face-to-face interviews were considered as unnecessary. Similar to the sequence of interviewing which was carried out at the diagnosing phase, each interviewee was explained about the anonymity and confidentiality of the information provided. Both of them had been participants in the previous phase of the research and thus I referred to the consent form they had already received (see Appendix D). All interviews during this phase were audio-recorded using MP3 Skype Recorder version 4.5, with the interviewees' permission. Each recorded interview lasted for approximately thirty minutes. The verbatim transcription process followed the same procedure as at the diagnosing phase. A full detail of the interview guide (both Vietnamese and English version) in which specific questions asked for their descriptions of the change activities, key positive and/or negative outcomes, and their learnings from participating in those activities was enclosed in Appendix G. Following the reviewing session, the main investigation of this CPR was closed because we (i.e., the practitioners and I) all agreed that the resistance management approach was in stable and useful form (see Section 5.5). This exiting point is in line with suggestions made by Mathiassen (2002: 338) in the sense that "a full learning cycle of understanding, supporting, and improving practice" is required to help the researchers gain insights into the problems and create opportunities for testing the usefulness of their interventions in realistic settings. This exiting point is also seen plausible for answering the research questions and for this particular case in which the implementation of actions was negotiated as the responsibility of the practitioners as discussed in Section 3.4.4. However, it is not to argue that further research cycle is unimportant or that our resistance management process should stop at this point. Quite the opposite, I acknowledged this exit point as one of the limitations of the study (see Section 6.6). Meanwhile, the practitioners at the AlphaBank were encouraged to keep the resistance management process going on.

#### **4.6. Method of data analysis**

The data collected during this CPR was mainly analysed from an interpretive perspective, which focuses more on reaching an in-depth understanding about social realities and patterns creating them rather than producing a static view of such realities. As each phase in the research cycle is heavily depended on the previous one, the data analysis started immediately after the data collection at each phase.

In overall, the data sources included audio-transcripts of semi-structured interviews at the diagnosis phase and the evaluation phase, notes on informal discussions with IT staff, relevant documents about the upgrading CBS project, audio-transcripts and notes on workshop and staff meetings during the action planning and taking phase. Because all the data sources can be treated as texts or written documents, qualitative content analysis – which aim is “to account for how a given text is made meaningful to readers” (Bryman and Bell, 2007, p. 571) – was used to analyse the data. Before proceeding further, there are two points that need to be clarified. First, it must be noted that texts are only seen as carriers of information and not the objective of the analysis; but the meanings underlying the texts are the objective of the analysis and can function as indicators to make statements about the social realities (Hsieh and Shannon, 2005). Second, whereas the qualitative content analysis usually focuses on the way the theme is treated and frequency of its occurrence (Spencer et al., 2008), the qualitative content analysis in this study is defined more broadly by some previous researchers to also include techniques in which the data are analysed solely qualitatively, without the use of counting or statistical techniques (e.g., Forman and Damschroder, 2007, Hsieh and Shannon, 2005; Patton, 2002). Specifically, the qualitative content analysis in this study is defined as “a qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002, p. 453).

Similar to other qualitative analysis method, previous researchers (e.g., Bryman and Bell 2007; Hsieh and Shannon, 2005) suggested that the researcher who uses the qualitative content analysis should consider the choice between two primary ways for analysing the data: an inductive or deductive way. Patton (2002) further explained the inductive approach as an approach in which the themes identified are strongly linked to the data themselves (e.g., grounded theory). In this sense, this form of

analysis is data-driven and the process of coding therefore will not try to fit the data into a pre-existing coding frame or the researcher's analytic preconceptions. On the other hand, the deductive approach tends to be driven by the researcher's theoretical or analytic interest in the area. Then, during the analysis, the researcher engages him or herself in the data and allows themes to emerge from the data (Hsieh and Shannon, 2005). Because I attempt to build new knowledge on existing knowledge and the data cannot be coded in an epistemological vacuum, the deductive approach with an open-minded attitude towards the data was applied. A number of themes were borrowed from previous theories or research findings such as Samuelson and Zeckhauser's (1988) status quo bias theory; Markus's (1983) political variant of the interaction theory; Hong and Kim's (2002) critical success factors for IS implementation and so forth. The process of qualitative content analysis was mainly based on the guideline provided by Forman and Damschroder (2007).

#### *Phase 1: Engagement with the data*

The purpose of this phase is to help me familiarise with the data. All the data sources were read again to gain a sense of the whole. I also returned to the notes taken during this CPR several times to examine my perspective and to further develop my coding. In terms of audio-records, while the process of transcription was time-consuming, frustrating, and boring, I found that it was an excellent way to start familiarising myself with the data. Moreover, when all taped sessions had been transcribed, I also read through the transcripts back against the original audio records for checking errors (e.g., typing errors, missing words). Throughout the study including this phase, memos were made to record ideas about ways of categorising the data, emerging themes or patterns. Similar to the field notes in the research diary, memos are notes that serve as reminders for not losing ideas and thoughts and provide the building blocks for a certain amount of reflection during the analysis process (Bryman and Bell, 2007).

#### *Phase 2: Generating a list of codes and coding the data*

According to Forman and Damschroder (2007), codes refer to a feature of the data (e.g., topics, attitudes or beliefs, thought) that appears interesting to the researcher and are used to reorganise the data in a way that facilitates interpretation. Despite the

fact that deductive coding was chosen in the present study as discussed above, Goldkuhl and Cronholm (2003) warned that there will be a risk of destroying the freshness of the data if the researcher's analytic preconceptions are applied too early in the coding process. Therefore, once I had read and familiarised with the data, a list of initial codes was generated from the data collected. Then I approached the data again with my analytic preconceptions that I wished to code around. Furthermore, I also remained open to identifying new codes throughout the analysis as discussed above. The final list of codes, with comprehensive descriptions and examples, is presented in the codebook (see Appendix H).

The process of coding or indexing the data was conducted manually as well as with NVivo 10 – a qualitative data analysis computer software package. In particular, I firstly coded the responses made by the organisational members using the software. The purpose was to understand what issues they were preoccupied with and hence what was important to them. Then I combined the responses of the organisational members with my field notes and relevant documents to include all the data sources from the research as a whole and, therefore, to enhance the findings' validity. For instance, the participants' reports of their opinion about the current CBS were checked against the documentation available from the records of defects found in the system. In this regard, triangulation across the data collection methods (i.e. semi-structured interviews, documentations, and informal discussions) served to strengthen the interpretations made (Yin, 2009). The latter coding process was mainly done manually with the traditional way of systematising the data (e.g., cutting with scissor and pasting with glue). Although I realised that the coding process is subjective (e.g., depending on my decisions to code the data by segments, phrases, sentences, or words), it was seen as a useful process for sifting and organising the data. Moreover, during this process, it had provided me with some ideas about interconnections between codes or issues which later helped to search for themes or patterns.

Before going to the next phase, it must be noted that, in good practice, the researcher should attempt to reduce the bias and subjectivity in this phase (e.g., attempting to make the data fit). One way to reduce the subjectivity is to establish the coding agreement (Forman and Damschroder, 2007, Neuendorf, 2002). The agreement is

achieved when two or more coders, who code the data independently, using the same codebook, can consistently apply the same codes to the same text segments (Forman and Damschroder, 2007). In the study, I asked one of my friends, who is a bilingual qualitative researcher and has sufficient knowledge in using NVivo, to use the codebook developed by me to code five interviews at the diagnosing phase to test the quality of coding. The comparison was conducted using NVivo. Using the cut-off figure of 70% as the benchmark for an acceptable agreement (Neuendorf, 2002), the comparison of her results and mine showed congruence to a great extent, with a minimum agreement at 89.04 % for the “Others” themes (see Appendix I).

### *Phase 3: Searching for themes or patterns*

When all the data had been initially coded, I tried to group different codes into higher order headings or potential themes. During this phase, some of the themes were identified based on previous theories or research findings as discussed above whereas others were formed by writing the name of each code on a separate piece of paper and playing around with organising them into theme-piles.

### *Phase 4: Reviewing themes*

In this phase, I attempted to refine a set of candidate themes by examining whether there was any theme that needed to be deleted (e.g., not enough data to support them or the data are too diverse), or broken down into separate themes, or grouped together. Moreover, as suggested by Patton (2002), I also considered whether the data within themes coheres together meaningfully while there are clear and identifiable distinctions between themes. Specifically, at the level of the coded data extracts, I read all the collated extracts for each theme to consider whether they appear to form a coherent pattern. Besides that, I considered the validity of individual themes in relation to the entire data set. During this process, re-reading the entire data set also helped me to code any additional data within themes that had been missed in earlier coding phases. As Ritchie and Lewis (2008) stated, because coding is an on-going organic process, it is necessary for re-coding the data set until the refinement does not add anything substantial (e.g., the coding frame fits the data well).

#### *Phase 5: Defining and naming themes*

At this phase, all the borrowed themes (e.g., conflict of interests, cognitive misperception, loss aversion) were defined and named based on the original work of previous researchers. Meanwhile, others were defined and named by determining what aspect of the data each theme captures. .

It must be noted in the codebook that there are some overlaps between certain themes such as “Rational-NewCBS-H.Costs” and “Irrational-LossAversion”. In this study, “Rational-NewCBS-H.Costs” is mainly used for reflecting the participants’ time, money, and effort for changing to the new CBS and this is taken into account with the perceived benefits before making their decision on the new system. Meanwhile, “Irrational-LossAversion” reflects the participants’ beliefs that the loss usually causes larger proportion or effect than the gain and, therefore, they tend to resist the loss. Given the distinction between these two, I decided to keep them as separate themes in the study.

#### *Phase 6: Interpretation and drawing conclusions*

When a set of fully worked-out themes had been done, the final analysis and writing-up of the findings was ready to begin. I decided to choose particularly vivid examples or extracts which capture the essence of each point I was demonstrating in the findings, without unnecessary complexity. In order to go beyond the description of the data, I further used examples from the literature and placed them within the discussion to produce a comparison of the findings with previous research. Additionally, arguments were also made in relation to the research questions.

### **4.7. Chapter summary**

This chapter focused on the question of how this CPR project was conducted and providing the details of the activities relating to my fieldwork at the AlphaBank. Moreover, the issues regarding the development of questionnaires, sample size, sampling technique, and data analysis technique were also discussed. The next chapter will discuss the findings of this CPR project according to each action research phase presented in this chapter.

## **CHAPTER 5: RESEARCH FINDINGS**

### **5.1. Introduction**

This chapter presents the empirical analysis and findings of three major phases (i.e., diagnosing phase, action planning and taking phase, and evaluation phase), corresponding to the research questions as documented in the previous chapter. Consequently, the reflection and learning in each “experiential learning cycle” as illustrated in Figure 4.1 is provided. In this chapter, I will discuss the findings relating to the causes of resistance to the CBS project at the AlphaBank in Section 5.3. Section 5.4 will then discuss how we made sense of the causes of resistance and our decision on the interventions. Finally, the outcomes of our interventions will be examined in Section 5.5.

Because I used to be a member of the AlphaBank and I brought in my prior experience and knowledge of the context under investigation, a common pitfall in this case is that my understanding perhaps is only partial. Thus, care was taken to ensure that my understanding was consistent with the staff’s understanding of the situation. For this reason, an overview of the CBS development process at the AlphaBank, which was generated as part of my informal discussions with the IT staff during the diagnosing phase, will be provided in the next section (Section 5.2) so that the CBS project can be understood in reference to the broader context of the case. This overview of the project from the staff’s perspective also helps to clarify why we perceived the situation as problematic and the resistance management would be beneficial to the organisation.

### **5.2. An overview of the CBS development process at the AlphaBank**

The first attempt to modernise and bring the bank up to the international standards (ISO 9001: 2008) took place back in 2011. At that time, a meeting was held to set up the strategic directions for the period 2011-2015 and vision to 2020. One important



issue in the meeting was the increase of operational and maintenance costs of the current CBS. As the IT department director recalled one of his arguments:

“...It usually takes more than 70% of the IT budget just to keep the system running. So the question is how we can gain advantage over competitors with little money left.” (Journal Entry, 14 Jun 2013)

He further added that:

“...While there has not been any severe problem caused by the existing system, there is no doubt that it is inflexible and therefore unsuitable in today’s competitive environment. The logic of doing business nowadays is different from what it was in 1980s or 1990s.” (Journal Entry, 14 Jun 2013)

In response to the issue, the ex-CEO made a commitment to the CBS upgrading project. The main forces for changing could be seen as inflexibility and high operational and maintenance costs of the current CBS. The IT department director, who has previous knowledge and experience on implementing the CBS, was appointed as the project leader and responsible for the planning and implementation of the project. The first meeting organised by the IT members was to consider whether to build it in-house or buy a packaged system because the CBS is responsible for the most critical tasks of bank operations and requires definitive control by itself. However, due to the significant cost, resources and expertise involved in in-house development and implementation, the IT department director later suggested purchasing a packaged system from a vendor and then hire a system integrator to customise it to suit the bank’s requirements.

In the latter part of 2011, the project taskforce arranged workshops to look at the future operation, or requirements beyond the existing system, and how the bank can optimise the future CBS. As part of the analysis, the taskforce initially considered eight vendors and three, in which one is the vendor of the current CBS at the Alphabank, were selected for more exhaustive screening (see Appendix J for vendor selection criteria). The IT director and CBS administrator also made field visits to these vendors’ offices and facilities in the North to meet their staff and to understand their processes and proficiencies. Local consultants from these vendors were brought in to consider the Alphabank’s current system and delivered presentations to help the

taskforce overcome their initial fear of the implementation process. The roll-out was negotiated with each vendor to be completed in two years. Meanwhile, the bank was required to follow a Request for Proposal (RFP) process for competitively selecting a vendor from among the approved vendors and including details on the bank's requirements.

In 2012, another meeting was held to reconsider the project. At that time, conflict happened in almost all issues involving the project, not only from the uncertainties brought by it but also from differences in understanding about certain implementation issues (e.g., gaps in knowledge between IT members and pure business members). Moreover at that time, the Alphabank was experiencing financial problems due to the significant loss from its securities investment, which caused severe resource constraints. As a consequence, instead of putting the project forward, the top management was more interested in solutions to work around the problems for not changing. In early 2013, following the announcement of the CEO replacement, the project was decided to be halted. However, as the IT department director stated, the project could not be postponed infinitely for the bank's future long-run goals. In that case, resistance to change will again be the main consideration.

### **5.3. Findings at the diagnosing stage**

The aim of this stage is to investigate why and how resistance to IS change takes place at the IS pre-implementation phase from a multiple-level perspective (Research Question 1.1 – 1.4). As discussed earlier in Chapter 2, the nature of resistance to IS change is multilevel and that instead of treating resistance to IS change as a black box, taking a multilevel perspective is seen as one way to open the black box and enhance our understanding of the phenomenon (Lapointe and Rivard, 2005). At this phase, although the relative importance of the causes for resistance cannot be established due to the interviewees' different opinions, this phase can be seen as successful when allowing both opposed categories of staff (business versus technical staff) to surface their concerns and provide a hint at the issues associated with the CBS project.

### **5.3.1. Environmental factors leading to resistance**

The most general layer of the environment is the macro-environment that consists of broad environmental factors which could have an impact to a greater or lesser extent on the AlphaBank. As I analysed the data at the diagnosing stage, the effect of the external environment became evidence. In line with the open systems perspective (e.g., Scott, 2003; Jones and Brazzel, 2006), it could be seen that organisational resistance to IS change is considered to be a rational formulation of organisational goals based on the analysis of the environment in which it is functioning. The environmental factor leading to the CBS upgrading project postponement is primarily economic. Meanwhile, the political/legal and technological element appeared as contributory in only one case.

The economic element was found as a main external factor which influenced the CBS upgrading project in all cases. For instance, one director explained:

“It can be seen as a consequence of the impact of the financial crisis and prolonged high inflation rate, which sometimes was in 2 figures. As you know, the bank activities are strongly associated with the business performance of individuals or enterprises. So their losses [due to the economic downturn] have led to an increase in bad debts at the AlphaBank. Given that, I suppose the bank needs to focus its resources at this time rather than investing in any big project.” (VID)

And another expressed that:

“The economic situation is going down so we need to be conservative to be suitable with the current situation...Hence, instead of investing on the system, cutting costs but still maintaining its features and the bank’s requirements are our priorities.” (QUD)

Even though the CBS change project was generally seen within the bank as essential for achieving flexibility and reducing high operational and maintenance costs of the current system, the overall pressure to decrease the development expenditure during

the economic downturn also resulted in shifting the questions of the system change under investigation:

“...The CBS change project really is to deal with how much the bank is willing to spend on technology...There was a time when we had money for the project but changes in the environment are truly a move against that...From my point of view, rather than debating whether to change, it is the time for us to concentrate on when and how we have to change in order to serve the best interest of the bank during the economic downturn.” (TID)

In the case under investigation, the bank’s top management interpreted these economic pressures as threats to the organisation’s investment on the CBS upgrading project. There was general consensus among different department or branch directors that the economic downturn forced them to reconsider the project’s feasibility as well as its urgency. The found effect of economic element on resistance to IS change confirms Damanpour and Schneider’s (2006) findings that organisations, when facing economic problems, tend not to largely invest in innovation, partly because they cannot afford to take risk or absorb the cost of failure.

Similar to the economic element, the political/legal element was considered as having a negative impact on the project. This was attributed to the economic situation in which securing physical resources for a large scale project such as the CBS change has become increasingly difficult for the bank:

“The unstable political system does somewhat affect the project. In particular, the real estate law has been changed so much by the government since last year and, therefore, many SMEs [Small and Medium Enterprises] owe tax arrears of hundreds of billions dong. What is the next consequence? Many banks are facing bad debts which cannot be recovered...So it is necessary to reconsider our business strategic plan at this time.” (TRD)

With support from Pfeffer and Salancik’s (1978) resource dependence theory, the findings indicated that a certain level of dependence on the external environment is vital for the organisational survival since external influences can lead to instability and uncertainty about the organisation’s future. In other words, “no organisation is completely self-contained or in complete control of the conditions of its own

existence... Survival comes when the organisation adjusts to, and copes with, its environment, not only when it makes efficient internal adjustments” (Pfeffer and Salancik, 2003: 19). Accordingly, in order to protect the internal operations from external influences, the chosen strategy for reducing external pressures, as occurred at the AlphaBank, entailed the postponement of the CBS project to address the shortage of physical resources.

The technological element was also mentioned as an external factor affecting the CBS change in one case. However, unlike the other two, this element generated the question of the urgency for changing even though the feasible technological solution to the current system was seen as only temporary:

“5 years ago if the system did not meet the requirements for new features or new products, the replacement or upgrade would be inevitable. However, in recent years, by adding a middleware to implement new features that the current system cannot do, most banks then choose this solution because the CBS replacement project is often expensive and time-consuming than expected. But in my opinion, it is just a temporary solution.” (QUD)

These findings are consistent with Scott’s (2003) argument that the environment directly affects organisational outcomes, which in turn affect its members’ subsequent perceptions and decisions. The job of the bank’s top management, therefore, is to “align, fit, or adapt the organisation, through interventions, to an objective reality that exists out there”, over which they have little or no control (Ford, 1999: 480). While the findings on the effects of external environment seem obvious and are similar to previous technological implementation studies (e.g., Khazanchi, 2005; Molla and Licker, 2005; Stoel and Muhanna, 2009), they provide a wake-up call for studying resistance to an IS change. First, environmental turbulence can be a hindrance when adopting a new IS (Tjornehoj and Mathiassen, 2010) and, therefore, be an important source for resistance. Second, the sensitivity to the dynamic environment is an important characteristic of a large scale technological change (Mathiassen and Vainio, 2007). At the AlphaBank, the findings revealed how environmental fluctuations reduced the bank’s ability to invest in the CBS project and how the increase in such environmental dynamics had changed the premises of their implementation practice, which embraced the focus on short-term performance

to be fitted to the actual situation. Although this outcome is supported by previous research (e.g., Damanpour and Schneider, 2006; Nguyen, 2009), it is contrary to the empirical findings of Rothenberg and Zyglidopoulos (2007) in which it was argued that organisations should not cut down their innovation expenditures in order to deal better with economic uncertainty. In this regard, one explanation may be that investment in the CBS project was not considered to be “essential expenditure” for the bank from the business-oriented senior managers. Another explanation is that in highly dynamic environment, the short-term survival of the bank was evaluated to be more important than its long-term investment in innovation. This trap, which was resulted from becoming too responsive to fads and other “noise” in the environment as well as enhancing short-term performance at the expense of reduced long-term flexibility (Volberda and Lewin, 2003: 2127), explained why we found ourselves in a dilemma in the next research phase.

### **5.3.2. Organisational factors leading to resistance**

Previous IS researchers have long argued that a critical determinant of an IS implementation success within an organisation is the match or fit between the proposed system and the organisational elements (e.g., Dwivedi et al., 2012; Hong and Kim, 2002). With respect to internal forces leading to resistance to change at this level, the misalignment between the project and the organisational short-term strategic plan was identified as a major barrier to the CBS implementation in all cases. Because organisations such as the AlphaBank are open systems that interact with the environment, any large scale and long running IT project is more likely to experience significant changes in business priorities and market conditions. As a consequence, such changes can adversely affect the original conditions of the project:

“Investing on the CBS upgrading project was completely aligned with the bank’s strategic plan. But it is no longer aligned at the moment. I agree with the IT Department Director that the project should be viewed as a long-term investment. Yet, it must be noted that the bank’s capital structure is mainly

formed by short-term deposits. So we can't make a decision about it without considering the current predicament faced by the bank.” (VID)

“...The CBS change requires long-term planning and investment. It helps the bank to secure its future growth. Because it is a complex and large-scale project, we are uncertain of how long it takes for the CBS replacement to work its way through to the result...Consequently, what interests other directors is the short-term performance. From their point of view, it is hard to say that the CBS project is still aligned with the bank's short-term strategic plan in the given dynamic environment.” (QUD)

In line with an empirical study conducted by Knodel (2004: 49), the greatest challenges facing the organisational decision makers of an organisation is “prioritising demands from the various business units and aligning IT with business goals”. Such a need to align the CBS project, in the case organisation studied here, became far more urgent because cost containment and improved return on investment (ROI) were bearing down on the senior managers with all its pressures. The findings are also concurrent with the work of Chan and Reich (2007) in which the main problem with IT alignment is often due to the time lag between business and IT planning processes. That is, as they explained, “given that the business environment and technology change so quickly, once an IT plan is enacted, there is a high probability that the plan and the technology are already obsolete” (p. 299). Consequently, from a positive point of view of this source of resistance, it can be argued that conflict associated with balancing short-term and long-term goal may attract new ways of thinking about the future state vision of the project. In other words, the reactions of some senior managers toward the importance of short-term strategic plan are not necessarily dysfunctional conflict (e.g., generating negative effects). On the contrary, their opposite reactions can serve as opportunities for ensuring the appropriateness of the CBS change and, therefore, are seen as “an asset and a resource in its implementation” (Ford et al., 2008: 368) or as “a vital seed” for avoiding poor decisions (Rahim, 2011: 11).

The lack of urgency, due to the feasible alternative solution during the change process, was also found as another main cause of resistance:

“...It [the current system] is still able to fulfil the bank’s requirements in an acceptable manner.” (TRD)

“So far as I know, most of requested modules can be added into the current core. Sometimes, it just takes longer than expected.” (MAD)

“In principle, everything [new functions] can be integrated [into the current system]... Time is the only issue to make it change.” (QUD)

According to Kotter (2008), with less urgency, people are even less inclined to look outside for the new possibilities, and they are solidly content with the status quo rather than launching into the unknown. Moreover, when the urgency for change is not strong enough among the people involved, the transformation process can slow down or even cannot succeed (Sutanto et al., 2008). The lack of urgency for changing the system, as found at the AlphaBank, may be also explained by significant changes in the environment which led to the misalignment between the project and the organisational short-term strategic plan. The project leader, in particular, did not convince enough “short-term results” to give other senior managers credibility and momentum for driving them out of their comfort zone. His message during the interview seems to move toward re-establishing the sense of urgency for the project, but fail to do so:

“...I could not drive others [the top management] away from short-term problems we are facing; persuade them that the CBS change is essential for the bank’s future; and, at the same time, ignore their reasonable concerns.

This is mainly due to the fact that our motivation for changing the CBS seems to be less relevant during the challenging economic time.” (QUD)

In overall, the findings confirm the importance of the sense of urgency and the role of the change managers for establishing urgency in an IS change project (e.g., Caldwell et al., 2008; Umble et al., 2003). However, the findings also provide new insights on approaches for creating the sense of urgency. Unlike previous research in which the need for establishing urgency was emphasised as “the first group of steps...to create a change environment” (Ensminger and Surry, 2008: 613) or in “the earlier parts of the project” (Lee-Kelley, 2002: 472); it was found in this study that seeing the challenge of creating a sense of urgency as “one-shot effort” seems not



plausible in nowadays rapid changing environment. As illustrated by the findings, the turbulent environment could lead to a gap between the original conditions of the project and its actual state, resulting in lessening the sense of urgency toward the CBS change. Thus, creating and maintaining a sense of urgency are seen to be equally vital.

The implementation risks were identified as a next key factor that strongly influenced the CBS upgrading project. One fundamental source of the implementation risks is the scope of change:

“Because the majority of activities of the bank are related to the core system, replacing it has high probability of disrupting the bank’s business operations.” (QUD)

“A large-scale project like this one is often associated with high risk. Imagining that the bank is like a moving car, the replacement of its engine when it is running is not easily at all. Although the CBS replacement can be preceded in a piecemeal manner to minimise the damage to the bank’s operations, its impact is obvious and inevitable.” (VID)

Meanwhile, another source contributing to the implementation risks is the estimated timeline for the project:

“In reality the project like this often lasts longer than expected. First, the implementation process will certainly generate more requests. And it will take time to solve all the requests. Second, changes in personnel during the prolonged project will be unavoidable. If they are members of the project team, the new members will need time to catch up with the project.” (TRD)

“...There are plenty of decisions that need to be made at the set-up stage. Being cautious of any variables can save considerable trouble at the later stage. This is a common reason of a big project such as this one running late and over budget.” (TID)

In this regard, the project’s complexity and size determine its risks. Since it is difficult to estimate how long and how much a project will cost because it is so complex or its clarity is so low, Pearlson and Saunders (2012) figured out that a high

level of planning is not only almost impossible in these circumstances because of the uncertainty surrounding the project, but it also makes it difficult to adapt to external changes that are bound to occur. Iversen et al. (2004) further added that such risks are also a primary source for resistance to change.

When a project is complex, Pearlson and Saunders (2012) suggested several solutions to overcome this problem. The first solution is that it is helpful to have a project leader with experience in similar situations. In the case organisation, the project leadership was identified as a contributing factor to overcome such problem:

“The IT department director, who has previous knowledge and experience on implementing the CBS, was appointed as the project leader.” (TID)

But it is also a possible source leading to resistance:

“...The project leader is surely a technical member...Well...Because they [other staff] do not have experience in the core system transformation, they do not want to have any risk on their side.” (QUD)

“The project requires the participation of many departments, not just IT department. But we do not have a vice president who is specialised on IT.” (VID)

“...A leader who had experience on the CBS change in the past seems to be far more valuable than a team of people who had been through few weeks training programme for the core replacement. This [having the CIO with the CBS transformation experience] is the biggest advantage we have in the project. But to pull the change project to its end and create a change organisation to push it there, a good project leader also requires both technological and business expertise...Instead of concentrating on technological issues as the needs for change, finding ways to convert them into business aspects will help others [business-oriented managers] engage in the project. In general, people are willing to change only if they see what their benefits are in the future.” (MAD)

The findings clearly revealed that an IS change is not, and should not be treated as, solely technological implementation that fails to integrate the unavoidable and

significant human system impacts. In the context of an IS implementation, the role of leader therefore would be to establish a goal congruence as well as identify and act on causes of conflicts affecting the IS change process. The importance of leader is consistent with the IS change literature (e.g., Bergman et al., 2002; Ke and Wei, 2008; Umble et al., 2003), and Weisbord (1976: 440) described the leaders as “air controllers” who should find the problems and create an approach for resolving those problems. In order to do so, a good IS leader should also be renowned for the level of management skills since the attributes which make a good technician probably will not be the necessary attributes for a good manager.

The second solution for managing a complex project, as Pearlson and Saunders (2012) recommended, is to rely on the vendors. One director at the AlphaBank said:

“Since we have little experience of upgrading the CBS, the implementation steps could be seen as not specific and they are just the initial steps of the project. The detailed guidelines and specific assignments are dependent on the chosen vendor.” (VID)

Yet, Pearlson and Saunders (2012) also noticed that it is important to balance the benefits achieved from bringing outsiders with the costs of not developing that skill set in house. In other words, when the project is over and the consultant leave, will the organisation be able to manage without them? (Pearlson and Saunders, 2012: 315). This problem actually existed at the AlphaBank:

“The replacement cost [license and equipment] is not the highest but the maintenance cost is. It maybe 3 to 5 times higher. We also have to contact the vendor for every problem occurred. Given these disadvantages, it is important to be proactive with the system and, therefore, the implementation team must include our staff.” (QUD)

The solution for the above problem requires the bank to have team members with significant experience. Unfortunately, it is not the case at the AlphaBank and the lack of human resources was found as a factor that strongly leads to resistance to the CBS change:

“At the moment, we do have a team with at least three year experience. But it is the experience for operating the system, not for solving complex problems of the system replacement.” (QUD)

“... We have only few people who have been with the bank from the beginning and know it from inside out. The lack of human resource is often an issue for a small and medium bank like us. Even in our larger counter counterparts, having a group with sufficient experience for the CBS transformation is also difficult as the life cycle of a core usually last for many years or even decade.” (TID)

At the same time, the lack of physical resources was also found as a cause for resistance at the organisational level. There was general agreement that the bank faced shortages of internal experienced staff and a corresponding lack of securing funds for the CBS upgrading project:

“The initial license cost for the new CBS could be few hundred thousand dollars, regardless of equipment cost and other costs incurred.” (QUD)

“... The implementation [of the new CBS] depends heavily on the available funds and human resources of the bank.” (MAD)

“... We found lack of physical resources is an important issue because we are facing financial problems at the moment.” (TRD)

Similar to the findings of previous research, factors that inhibit the adoption of a new system also involve the cost of the project (Premkumar, 2003) and the human resource (Nguyen, 2009) which can contribute to the success of the IS change project. Hence, resources constraints can force firms to consider the alternative approach or solution to “securing the missing funds or the required personnel” (Gibbert et al., 2006: 15).

The third solution for managing a complex project is to establish good communication among the team members so that they can operate as an integrated unit (Pearlson and Saunders, 2012). Regarding this issue, it was found that lack of communication across departments was another cause of resistance:

“Communication across departments does exist but I think it is not effective because we [IT staff and business-oriented staff] do not speak the same language [different professional expertise].” (VID)

“...We could not find a common language for any issue discussed. Therefore, any problem associated with IT is completely resolved by the IT department itself.” (QUD)

“Frustrated...Really frustrated project...We experienced in certain parts along the way a large disconnect between what the CBS change was expected to deliver and what our business expected from the core. This is mainly due to our communication problems.” (MAD)

Moreover, the lack of communication or involvement of various stakeholders, especially operational staff who were not involved the decision making process, was another potential source for resistance at the latter stage of the project:

“Staff who are not involved the project will receive the notification if the new system is deployed and put into operation only.” (TID)

“...It is unquestionably that staff communication is the cornerstone for the project’s success. But only the key personnel and relevant staff were informed about the project at this stage. We don’t want to be frustrated by the limited outlook of others. It is simply the way we do business here...It can help reduce work overload for the executive management team.” (TRD)

“...For every project or strategic decision, we are still following a top-down approach. That is to say, all decisions are made by the top management and the staff just follow...This approach sometimes makes trouble by allowing an event to become a big-bang surprise for the subordinates.” (MAD)

It is for sure that the senior management team have irrefutable strengths and they are in a unique position to do things that no other group in the organisation can do as well. However, one can argue that the bank has its approach half wrong because “it will fail to fully leverage the real power and competencies of the many” (Frisch, 2011: 3), especially for a complex change project such as this one in which their limitations were understood (e.g., unclear about the requirements that a new system

must have). Although it can be seen that the issue associated with lack of involvement of various stakeholders goes beyond the scope of the diagnosis at the moment, it must be noted that failure to include and manage various stakeholders, especially operational staff who will directly interact with the new system and affect the project's outcomes, can lead to costly mistake later in the project if they are not supportive of the new system (Pearlson and Saunders, 2012). An empirical research conducted by Wagner and Newell (2007) supported this point and showed that user participation during the pre-implementation phase can avoid user resistance and the need for modifications of a system at the post-implementation phase.

The lack of communication also tends to follow the organisational structure at the AlphaBank, which is primarily in the vertical handoff decision making process. Based on Mintzberg's (1980) model of organisational configuration, the AlphaBank can be seen as the archetype of the divisionalised bureaucracy. Though Mintzberg does not overtly posit the relationship between his divisionalised form and the propensity of the organisation to resist the change, Pugh (2007) figured out that information, skills and knowledge sharing across divisions or the organisational boundaries is difficult to achieve at this form and this is a serious disadvantage in dealing with multi-faceted change.

The lack of communication also led to a problem for measuring the outcomes of the project:

“The technical members believe that the outcomes should be measured based on applied aspects of the new system while others [business-oriented members] are more concerned about its return on the investment.” (QUD)

“In my view...it is true that this is an IT project and we cannot simply apply business techniques for measuring its value...But then what happens if the project fails or the new system is not as expected? Of course, millions of dollars of investment is going to be wasted.” (VID)

In this study, the project's low clarity can be seen as the result of its multiple key stakeholders' conflicting expectations for the project. James and Ward (2001) stated that change initiatives are only successful when key stakeholders in the organisation fully participate in the development of the vision, process, and expected outcomes

for the change. In order to enhance their fully participation and involvement, organisational supports in terms of openness to discuss the problem and training to leverage the technical skills of the team are a critical factor (Pearlson and Saunders, 2012). However, it was identified that lack of organisational supports, both in terms of discussion and training, was another root that slowed down the change process at the AlphaBank:

“The chosen vendor will provide training for the project team if we decide to sign the contract. Besides that, we are self-learning by doing and evaluating things.” (QUD)

“If there is any problem occurred, the project team members are self-motivated to contact others by phone or email, or arrange for a direct meeting, if needed.” (QUD)

“In my opinion...well...not much has been done to create buy-in for the project since it is still at the initial stage. In terms of cooperation...if IT staff need any information, we provide them on their requests.” (MAD)

Meanwhile, the participants at the managerial level also claimed that there was no specific reward policy or programme designed to foster the change:

“Because the project is at the early stage, we do not have any specific policy for rewarding staff involved the project. Only extra paid for working overtime.” (TID)

“...We need to think about this issue seriously...The project team, especially IT staff, are those who need to put a lot of energy into this project. They may be required to spend days and nights in the office. For that reason, they will really need some incentives other than extra paid for working overtime.” (QUD)

The findings above are congruence with the equity implementation perspective of Joshi (2005) in which the issue of distributive fairness could lead the individuals involved to perceive procedural inequity and question the fairness between their inputs and deservingness. In other words, whereas organisational supports for change are an effective tool to reduce resistance, not building these supports when the

penalties for failure are obvious will decrease the effort or the performance of the individuals involved (Kim and Kankanhalli, 2009). Finally, borrowing the suggestion made by Pearlson and Saunders (2012), it is believed that an important way to increase the likelihood of organisational change success is not only to gain commitment from various stakeholders but also to sustain that commitment throughout the change process.

### **5.3.3. Group factors leading to resistance**

The political variant of the interaction theory proposed by Markus (1983) indicates that an organisation is fundamentally a political entity and the implementation of a new IS usually embodies political struggles or an imbalance distribution of intra-organisational power and resources. Based on this theory, “neither changing people nor changing the features of the new system will reduce resistance as long as the conditions which gave rise to it persist” (Markus, 1983: 438). Given that, I also preceded the case organisation to uncover whether such conflict of interest due to the new CBS implementation exists at the AlphaBank.

The most salient finding was that the reasons groups resist the CBS change were not identical across the organisational boundaries and the degree of group resistance very much depended on the functions of each group at the AlphaBank. It is consistent with prior studies that functional and cultural differences within organisations tend to influence contrasting interpretations of an IS to be developed (e.g., Lapointe and Rivard, 2005; Meissonier and Houze, 2010). In the case under investigation, three antecedences of conflict of interest were identified.

The first cause of conflict of interest is due to the increase in workload for some groups but not for others. In this case, the resistance group was composed of only IT department employees who were strongly affected by the CBS upgrading project:

“It takes approximately 2 weeks for training the business-oriented staff. But the IT staff must spend at least 2 years for training, understanding, and implementing the new system.” (QUD)



“...When the new system is implemented, there will be many troubles we [IT staff] have never experienced before because we are not familiar with it. It is possible that we will be paralysed by information and work overload.”

(QUD)

Given this finding, another question raised was that while the initial idea for the CBS change was generated by IT members, they were also the ones but not business-oriented staff who disclosed resistance toward the CBS upgrading project. By delving deeper into this issue, it was found that:

“...At the moment they [the board of management] consider IT as a tool to achieve the bank’s business objectives rather than as its business strategy... We have a reward system for other departments but not for the IT department... What the IT staff have here is just the salary” (QUD)

In line with the research conducted by Klaus and Blanton (2010), the IS change often requires that users’ job descriptions are revised or that they have to perform additional effort for their tasks. Therefore, these two issues are likely to be considered as a source for resistance to IS change, particularly if they do not feel compensated for the change. In this sense, this outcome can also be seen as the result of the reward issue which was identified previously at the organisational level (e.g., no specific reward policy). However, the interesting finding derived from this outcome is that the root of this type of conflict can also be partly explained by the senior managers’ different perception of the role of the CBS at the AlphaBank. Previous research (e.g., Joshi, 2005; Nanji et al., 2009; Wagner and Newell, 2007) frequently reported that the increase in workload for some groups but not for others is the major cause for group resistance, but none has questioned why it is always the case. Instead, the possible underlying reason for the above source of resistance to exist is probably due to the business-oriented managers’ misperception of the role of the technology in the organisation. In particular, when asking about the purposes of the system change, other noticeable frequent terms used among the business executives to represent the CBS were “tool”, “mechanism”, or “instrument” to achieve the business operational efficiency. This is not to say that the CBS does not continue to influence competition. It does, as most of the interviewees perceived, but its influence over the bank was misunderstood because the exact value of the

proposed innovative investment was not provided clearly. Another trap that business executives fell into, as in this study, was assuming that technology is simply a mechanism for doing business, leading to their underestimation of the role of technology as well as the absence of, or difficulty in, establishing the IT staff performance appraisals. This issue also explained why the investment in the CBS project was not considered to be “essential expenditure” during the economic downturn from the business-oriented senior managers.

The second cause of conflict of interest is due to the redistribution of power. At this time, the new system implied a power shift which was considered as unfavourable to functional departments although their reasons for resistance seemed to reflect their suspicion about the real purpose for change or lack of interest for changing the CBS during the economic downturn:

“Most modern CBSs have a feature for cross-managing and controlling to enhance the bank’s internal security.” (QUD)

“...The decentralisation feature of the new system seems to put us under strict supervision and monitoring.” (TID)

“...Everything can be tracked down by the new system. It can track who, what, and when we are doing. A report can be made in minutes instead of hours or days as in the current system. But I don’t think this and other features are worth enough for our money while we are facing the economic issues.” (TRD)

Similar to the second cause of conflict of interest, the reallocation of resources was also identified as another reason for functional departments to resist to the CBS change due to their lack of urgency for changing the current system as well as the negative effect of change on their performance:

“While the current CBS is still capable to help us [financial department employees] over our tasks, replacing it will affect our department’s performance because existing modules integrated in the current CBS we have built so far will be probably lost or changed. If the new CBS can provide such functions or features, then it is okay for me.” (VID)

“...There was also disagreement between departments when deciding the important applications or features that should be deployed first because it is impossible to integrate every existing application [from the current CBS] into the new CBS within 2 year time as suggested.” (QUD)

“It’s just like a zero sum game...Some [departments] have to sacrifice [their modules] in order to minimise the customisation [of the new system] and speed up the implementation process.” (MAD)

In the present study, the political variant makes some precise predictions about where resistance is likely to occur at the group level. The pattern of the outcomes is concurrent with the research conducted by Markus (1983) and that organisational units may differ in the extent to which they actively pursue to gain power and valuable resources, but it is not likely that they will happily give these valuable resources up. When the introduction of a new system embodies a loss to certain groups, these groups are likely to resist the system. In this regard, the process of implementing a new system is the same as the political decision making process reported by Meissonier and Houze (2010); at least during the front-half of the IS life cycle where socio-political conflict is considered as an important source of resistance and this, without careful interpretation, could be hindered by system or task-oriented conflict (e.g., the unnecessary features of the new system or the negative effects of change on the performance).

Even though it was found that conflict of interest is an issue at the IS pre-implementation stage, care was taken because the responses of department director or branch director may only be their personal opinion toward the project and do not represent the convergence of individual member’s shared perceptions and responses. Therefore, the next section will provide a useful insight into the exploration of causes of resistance at the individual level.

#### **5.3.4. Individual factors leading to resistance**

There were two problems when I proceeded to explore causes of resistance at the individual level and these problems reflected the distinctive different characteristics

between the pre-implementation stage and post-implementation stage of an IS change. The first problem was that not every operational staff had been informed about the change. They are mainly business-oriented staff who will receive the notification if the new system is deployed and put into operation only. As one business-oriented staff explained:

“...Any decision involving the CBS or organisational change is made by the bank’s top management or the project team...Then we are only informed when it is done.” (THC)

However, I decided to include them in the sample because they are those who will directly interact with the new system and, as a consequence, will affect the project’s outcomes. In other words, there was a risk that taking into account only those who involved the project will not guarantee the success of the project. Previous research (e.g., Hawari et al., 2010; Spencer et al., 2011) have pointed out many cases in which the IS project is considered as complete or partial failure and underperformance because of lack of support of end users in the new system, resulting in the actual low return of the IS investment.

Another reason for including business-oriented staff was that they all were working closely with the project team under the same departments or branches. Some senior managers also expressed the view that it would be useful for them if they know what their subordinates was thinking and feeling about the CBS change. In fact, all business-oriented staff, in one way or another (e.g., regular meetings or colleague conversations), were informally informed about the project before this study:

“I heard about the CBS change from my colleagues...We are parts of the bank and I think we have the right to know about it.” (OAO)

“...I know what is going on here [the CBS change project]...Why do the top managers keep the communication until the end? The answer may be that this [top-down approach] has become our managerial culture.” (LYA)

The second problem was that the new system has not been installed yet. Hence, the findings at this level of analysis are primarily associated with the business-oriented staff’s intention to resist the new system, rather than their actual behaviour.

According to Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), the focal factor that predicts the individual's behaviour (e.g., resistance to IT usage) is his or her intention. Particularly, intention provides the essential point that reflects how hard people are willing to try, of how much of an effort they are planning to exert in order to perform a behaviour (Fishbein and Ajzen, 1975). As such, it is believed that managing the individual's intention to resist the IS change is likely to result in reducing his or her future resistance behaviour. Consequently, the assumption about the nature of resistance in this study is similar to Markus (1983: 431) in the sense that "behaviours can be observed, but intentions cannot" and, therefore, "resistance is a relative rather than an absolute behaviour". From this point of view, the resistance phenomenon can also be expressed in both emotional and cognitive dimension and, therefore, resistance exists once the individual's attitude is formed.

The findings from eighteen operational staff at the AlphaBank indicated that despite the fact that the current CBS has some limitations (e.g., slow transaction recovery time, limited support functions); most of them, both technological-oriented and business-oriented staff, were quite satisfied with the current system. Specifically, it was perceived as usefulness:

"...Of course it [the current CBS] cannot be seen as perfect...but in general I am satisfied with it...the bank's requirements are almost fully met." (THO)

"I think even though it is an old technology, it still meets our customers' requirements. So why do we have to make it changed?" (MIO)

As well as ease of use:

"It is not sophisticated and easy to remember [its functions] as compared to other systems I have known." (NGC)

"It is not too difficult to use. But newcomers will probably feel a little crestfallen because it is entirely in English." (VUO)

The staff's satisfaction with the current system as a source of resistance confirms earlier findings from the bank's senior managers who claimed that lack of urgency for changing the CBS was an important issue leading to the postponement of the

project. Nonetheless, when proceeding to the next question that is whether they would like to have the current system changed or not, the data collected allowed me to divide operational staff into two groups: the promoters (who support the change) and the resisters (who against the change). The promoters are mainly business-oriented staff, with only one exception. Meanwhile, the resisters include only technical members.

In terms of the similarities between these two groups, high relative costs (i.e., time, money and efforts) for changing to the new system were found as a key source for their resistance to change at the individual level. In particular, these costs can take a form of uncertainty costs:

“I do not know how beneficial it [the new CBS] is. But it is for sure that I have to spend a lot of time and effort for learning the new system.” (HIA)

“...[If the new system is implemented] firing irrelevant skilled staff will be a possible option.” (VUO)

Or transition costs:

“It is possible that we cannot make use of some existing software and hardware [of the current CBS]. If it is, we will then have to go back from the beginning and provide training to all users.” (TRA)

“We [IT staff] used to be full of enthusiasm and positive thinking about the project. As technicians, we loved to explore new technologies and new methods to solve the bank’s problems...Then when facing the reality, we realised that the CBS change required us to have better skills and knowledge than what we expected...Just being enthusiasm is not enough to bring about this change.” (SOM)

“...By replacing the current system, our [IT staff] workload will be doubled...On one hand, we have to take care of any technical issues during the bank’s operation. On another hand, we have to spend time on the project.” (PHM)

As well as sunk costs:

“It will take a lot of time for learning and getting used to it [the new CBS]. Not every issue [when using it] can be figured out in the training.” (LYA)

“This [the current CBS] is the only one that I have been trained and mastered my skills...As the requirement of my job, I gave it a lot of time and efforts for checking and fixing any issue occurred during the bank’s operation. Such knowledge and experience gained could be lost due to the system change.” (MIO)

With respect to the differences between these two groups, the different degree of relative benefits was one of the key answers to their decisions to resist or adopt the new system. Whereas the promoters perceived high relative benefits brought by the change that can compensate for their costs or losses:

“...I am quite satisfied with the current system. But if the new system run smoother, faster, and be able to serve our customers better, I totally agree with the change.” (NGT)

“It is usually that a new technology is better than an old one. For me, it is hard to believe that the opposite is the case...I don’t think people is willing to spend a lot of money for no good reason.” (ANC)

The resisters perceived low relative benefits brought by the change:

“Though it [the current CBS] is old, most of new features or functions can be integrated on it via middle layers.” (MIO)

“...The only thing I will gain from the project is the experience... No reward or incentive for keeping the project on time and on budget.” (HIA)

“I don’t think I will benefit from the system change because the end users of the new CBS are mainly the business-oriented staff, not the technical members...For instance, my tasks involve writing and testing code and the new system cannot make my tasks easier.” (TRO)

The pattern of the findings is supported by Joshi’s (1991) equity implementation model in which individuals attempt to evaluate most changes and changes that are

considered unfavourable are likely to be resisted. Moreover, this pattern also confirms the model in the sense that the individuals are likely to compare their relative outcomes with those of other groups to ensure the fairness of the change. However, the inconsistent finding is that business-oriented staff favoured the project, not because they clearly understood the effects of the system change but because they simply held optimistic views about the new technology (e.g., new technology is usually better). In contrast to the findings at the group level, none of them expressed the view that the CBS change could lead to their underperformance due to the loss of some existing modules associated with their tasks. Given this, their optimistic views were interpreted as a negative sign rather than as a positive one. In other words, it is possible that these promoters will quickly turn into the resisters if the inequity distribution of resources (e.g., loss of important applications) becomes relevant (Lapointe and Rivard, 2005). Later, the identified pattern associated with “cognitive misperception due to lack of information” among the business-oriented staff supports this argument. It is therefore essential to understand the concerns of all parties involved during the pre-implementation phase to prevent long-term implementation failure of the system change (Meissonier and Houze, 2010).

The effects from social pressure (e.g., colleagues) were found as another different characteristic between two groups and also a possible source for resistance. Specifically, while these effects did not occur in the promoters’ group:

“We only discussed about working issues because they are our major concerns.” (OAO)

“I don’t think I was affected much by my colleagues because we shared the same view about the project. In our view, it [the new CBS] was to improve our working performance.” (NGC)

They were considered to have sufficient effects in the resisters’ group:

“We [IT staff] had conversations sometimes and he [the participant’s colleague] complained that there were so many things for programming.” (TRA)



“There was a rumour about the CBS replacement and we’ve had many conversations about it. They’ve affected me somehow.” (VUO)

Prior research (Kim and Kankanhalli, 2009) has shown that colleagues’ opinion toward an IS change can increase resistance. The pattern of the findings extends this idea by indicating that the effects of social pressure may vary across groups (e.g., the promoters versus the resisters). Therefore, this outcome corroborates the findings of previous research (e.g., Davis et al., 1989; Yousafzai et al., 2010) on the uncertain theoretical status of social pressure (or subjective norms) in the technology adoption context. Perhaps, the reason for the absence of the effects of social pressure in previous research is likely due to the context in which the new technology may be perceived in overall as a good innovation by the end users.

Nevertheless, the above findings can be used to explain how the resistance takes place but provide little room to uncover why it takes place. The twist to the question helped me to find out that perceived control in terms of self-efficacy was another important issue between two groups under investigation. In particular, whereas the promoters felt that they have ability to cope with the change (e.g., via training or practicing), the resisters believed that the CBS change requires them to obtain new skills or complete new tasks which sometimes exceed their capability or skill level:

“Indeed, it [the current system] was based on the 2-tier architecture. So it will be very difficult for transferring the data into other modern CBSs which are usually based on the N-tier architecture.” (SOM)

“Some parts of the current system were written in the Centura programming language. It is rare and out of our knowledge.” (TRO)

The results indicated that lack of self-efficacy was also a source for resistance. Further proceeding also helped me to find the answer for the exceptional case in the promoters’ group. It was found that this technical staff preferred to stay with the current situation and maintained his status quo. However, his lack of sense of control over the IS event was the main cause that forced him to accept the change:

“The fact is that if I do not hold a favourable attitude toward the CBS upgrading project, it will be preceded anyway as long as it is beneficial to the bank.” (MIO)

The above findings are consistent with Ajzen’s (1985) Theory of Planned Behaviour (TPB) which is based on Fishbein and Ajzen’s (1975) Theory of Reasoned Action (TRA). According to him, the individuals’ behaviour is not always under volitional control in which they can decide at will to perform or not perform that behaviour. In many situations, the resources and opportunities available to them, to some extent, dictate the likelihood of their behavioural achievement. Hence, as he explained, perceptions of behavioural control must also be taken into account since they can impact both intention and behaviour. As such, given an insufficient degree of actual control over the behaviour (e.g., lack of self-efficacy, little control over the situation), the individuals will not be able to carry out their intention (Ajzen, 2002).

The last difference between two groups was their perceptions toward the CBS upgrading project. Whereas the promoters saw the gains as their major concerns, the resisters did not and believed that the project put them under risk in large-payoff magnitudes. As a result, the resisters tended to be loss aversion to minimise their losses as much as possible:

“Minimising the losses means that my benefits will increase. So I think of the losses first.” (MIO)

“Another bank, which uses the same CBS as ours, is currently upgrading its system. I suppose we should wait to see their results to minimise our risk.” (SOM)

“...It is all about ‘yes or no’ answer for a technical staff like us. If we say ‘yes’, we then have to make it done. Otherwise, we must explain the reasons for our ‘no’ answer. It is not acceptable to say ‘yes, but’ here at this bank. They [top managers] did not understand for our coming-up issues along the change process. Hence, I felt sometimes it was safer to say ‘no’ for avoiding my personal risk.” (PHM)

At the same time, it was also found that cognitive misperception due to lack of information about the project and/or the proposed system was a potential source of resistance in the promoters' group:

“I haven't seen or interacted with the new CBS. So, to be honest, I am worried that I have to learn from scratch like a new comer.” (THC)

“We [business-oriented staff] do not have much information about the new system...It maybe not as much beneficial as we thought.” (VAC)

The findings illustrated that cognitive misperception, both in terms of loss aversion and lack of information, was another reason for status quo bias as well as resistance (Kim and Kankanhalli, 2009). Yet, the interesting findings of the interviews were that the importance of loss aversion and lack of information varied depending on the circumstances surrounding the staff's decisions. In terms of loss aversion, the technical staff were risk averse (e.g., loss avoidance) while the business-oriented staff became risk seeking (e.g., looking for the benefits gained from the project). Despite the fact that lack of information about the project was the issue among business-oriented staff, no loss aversion was found because, as Erev et al. (2008) argued, they might believe that their decisions were made in small-payoff magnitudes (e.g., being able to cope with the change via training or practicing). In terms of cognitive misperception due to lack of information, the pattern confirms earlier findings that lack of communication or involvement of operational staff was a major issue at the organisational level. This outcome is similar to prior research (e.g., Nanji et al., 2009; O'Sullivan, 2007) which found that lack of understanding of change is a common issue among the business employees who are not involved in the IS change process. According to Shang and Su (2004), this issue could lead to the employees' misconceptions or lack of trust on the change, resulting in their resistance.

### **5.3.5. Summary and discussions at the diagnosing phase**

The results of the transcript analysis and the supports from other sources of evidence (for triangulating the findings) which led to the identification of causes of resistance at the diagnosing phase are summarised in Table 5.1. Categories were created and incorporated into this table to provide a better conceptualisation among the causes of resistance based on their similar characteristics. Besides that, the table also summarised the dynamic links among categories across levels, corresponding to the evidence and discussions in previous sections.

In overall, eighteen categories of causes of resistance emerged from the interviews. Nonetheless, this research phase identified new categories of issues not addressed in previous research (see Table 2.3 for the comparison). First, the categories involving the external environment were almost absent in those studies, although the changing environment during an IS implementation can greatly affect the users' responses to the change. Second, the categories at the organisational level are somewhat similar to, for instance, "the organisational issues" in Klaus and Blanton (2010); but the identified categories in this study also added new categories (i.e., "misalignment between the project and organisational short-term strategic plan"; "leadership problems"). Third, the categories at the individual level included the "satisfaction with the current system" and "cognitive misperception due to lack of information" as determinants of resistance which were not included in prior research. Finally, given the dynamic links across categories, the findings showed that the individual's decision to resist an IS change is not a result of a simple reason. Instead, it is a consequence of the complex interaction of various threats which has been being created during the change. Thus, by viewing resistance through a multilevel lens, the identified categories provide a more comprehensive perspective on the roots of resistance.

**Table 5.1: Summary of the findings at the diagnosing phase**

| <b>Level of analysis</b>     | <b>Category</b>         | <b>Causes of resistance</b>  | <b>Link with other categories</b>   | <b>Supports from other sources of evidence</b>   |
|------------------------------|-------------------------|--|---|--|
| External environmental level | Economic element        | <ul style="list-style-type: none"> <li>_ Financial crisis</li> <li>_ Economic downturn</li> <li>_ Prolonged high inflation rate</li> </ul> | <ul style="list-style-type: none"> <li>_ Misalignment between the project and organisational short-term strategic plan (2)</li> <li>_ Lack of physical resources (2)</li> <li>_ Conflict of interest (3)</li> </ul> | <ul style="list-style-type: none"> <li>_ Publications: Vietnam inflation rate has been persistently higher than other emerging market economies in the region (IMF, 2013).</li> <li>_ Newspapers: While the global economy has seen recovery signs, Vietnam’s economic growth rate is expected to remain low in the coming years (The Saigon Times, 2014)</li> <li>_ Company documents: The bank’s annual reports and financial statements showed that its net profit decreases from 364 billion VND in 2011 to 16.8 billion VND in 2012.</li> </ul> |
|                              | Political/Legal element | <ul style="list-style-type: none"> <li>_ Change in real estate law</li> </ul>  | (Similar to above)  | <ul style="list-style-type: none"> <li>_ Newspapers: It is difficult for the real estate market in Vietnam to recover (BBC News, 2013)</li> </ul>  |
|                              | Technological element   | <ul style="list-style-type: none"> <li>_ Middleware can be used to implement new features that the current system cannot do</li> </ul>     | <ul style="list-style-type: none"> <li>_ Lack of urgency (2)</li> <li>_ Greater costs than benefits brought by the new system (4)</li> </ul>  | <ul style="list-style-type: none"> <li>_ Newspapers: Middleware is how banks are circumventing the problem (Forbes, 2013)</li> </ul>   |

|                      |   |   |   |  |
|----------------------|---|---|---|--|
| Organisational level | Misalignment between the project and organisational short-term strategic plan | _ Large scale and long running IT project   | _ Economic element (1)<br>_ Political/Legal element (1)   | _ Company documents:<br>The deployment plan showed that they spent quite a period of time for assessing the technical and functional requirements of the bank to mitigate the implementation risk.<br>_ Informal discussions:<br>“There were several meetings to discuss the issues relating to the technical and functional requirements of the bank. It seemed that we would not be able to reach an agreement on these issues.”(QUD) (Journal Entry, 17 Jun 2013) |
|                      | Lack of urgency   | _ Feasible alternative solution<br>_ The current system is still able to fulfil the bank’s requirements in an acceptable manner | _ Technological element (1)<br>_ Leadership problems (2)<br>_ Greater costs than benefits brought by the new system (4) | _ Informal discussions:<br>“At the moment we are using a middleware layer to launch our internet banking services to enhance the system security and handle the unexpected peaks of customers’ demand.”<br>(HIA) (Journal Entry 15 Jun 2013)<br>_ Company documents:<br>The help desk call records and the error log showed that up to 70% of the errors or problems are caused by the users’ input errors.  |

|  |                            |  |   |  |
|--|----------------------------|--|---|--|
|  | Implementation risks       | <ul style="list-style-type: none"> <li>_ Large scale and long running IT project</li> </ul>  | N/A   | <ul style="list-style-type: none"> <li>_ It was supported by the company documents and informal discussions with IT staff in which the bank's members spent quite a period of time for assessing the technical and functional requirements (Similar to above)</li> </ul> |
|  | Leadership problems        | <ul style="list-style-type: none"> <li>_ Requirement for the participation of many departments</li> <li>_ Lack of a suitable project leader with power and prestige</li> </ul> | <ul style="list-style-type: none"> <li>_ Lack of urgency (2)</li> </ul>   | N/A  |
|  | Lack of human resources    | <ul style="list-style-type: none"> <li>_ Lack of experience for solving complex problems of the system replacement</li> </ul>  | N/A   | <ul style="list-style-type: none"> <li>_ Informal discussions: "We have little experience of the types of projects that are incurred with the CBS replacements. It is the biggest project that we have ever had so far." (SOM) (Journal Entry 15 Jun 2013)</li> </ul>    |
|  | Lack of physical resources | <ul style="list-style-type: none"> <li>_ Lack of securing funds</li> <li>_ High replacement cost</li> </ul>  | <ul style="list-style-type: none"> <li>_ Economic element (1)</li> <li>_ Political/Legal element (1)</li> </ul> | <ul style="list-style-type: none"> <li>_ Company documents: The bank's annual report and financial statements showed that the bank made a significant loss of 238 billion VND from its securities investment in 2012.</li> </ul>   |

|  |  |   |   |  |
|--|--|---|---|--|
|  | Lack of communication and/or involvement | <ul style="list-style-type: none"> <li>_ Different education background between IT and business-oriented staff</li> <li>_ Lack of involvement of various stakeholders, especially operational staff, due to the vertical handoff decision making process</li> </ul> | <ul style="list-style-type: none"> <li>_ Cognitive misperception due to lack of information (4)</li> </ul>  | N/A  |
|  | Lack of organisational supports          | <ul style="list-style-type: none"> <li>_ Depend on the chosen vendor for training</li> <li>_ Lack of established channels for interchange and discussion</li> </ul>   | <ul style="list-style-type: none"> <li>_ Greater costs than benefits brought by the new system (4)</li> </ul>                                     | <ul style="list-style-type: none"> <li>_ Company documents: The RFP indicated that the scope of work for the chosen vendor also includes the identification of training needs, planning out an effective training programme, and developing skills for the staff.</li> </ul> |
|  | No specific reward policy                | <ul style="list-style-type: none"> <li>_ Difficult to establish a reward structure for the project team at the early stage of the project</li> </ul>  | <ul style="list-style-type: none"> <li>_ Conflict of interest (3)</li> <li>_ Greater costs than benefits brought by the new system (4)</li> </ul> | N/A  |



|                  |   |   |   |  |
|------------------|---|---|---|--|
| Group level      | Conflict of interest                                  | <ul style="list-style-type: none"> <li>_ Increase in workload</li> <li>_ Redistribution of power</li> <li>_ Reallocation of resources</li> </ul>  | <ul style="list-style-type: none"> <li>_ Greater costs than benefits brought by the new system (4)</li> <li>_ No specific reward policy (2)</li> <li>_ Economic element (1)</li> <li>_ Lack of urgency (2)</li> </ul> | <p>_ Company documents:</p> <p>The deployment plan showed that most of activities were planned for and carried out by IT members.</p> <p>The brochures provided by the selected vendors indicated that most modern CBS can track and report on employee queries by recording each time he/she accesses a screen.</p> <p>The RFP showed that only essential modules were requested to be included in the new system in order to reduce the implementation time.</p> |
| Individual level | Satisfaction with the current system                  | _ Usefulness and ease of use of the current system  | _ Lack of urgency (2)   | _ Company documents:<br>The help desk call records showed that most of the problems were not associated with the current system errors, but the human errors (e.g., input errors and/or wrong procedure).  |
|                  | Greater costs than benefits brought by the new system | <ul style="list-style-type: none"> <li>_ High relative costs for changing in terms of time, money, and efforts</li> <li>_ Low relative benefits that cannot compensate for the costs or losses</li> </ul> | <ul style="list-style-type: none"> <li>_ Technological element (1)</li> <li>_ No specific reward policy (2)</li> <li>_ Conflict of interest (3)</li> </ul>  | N/A  |

|  |  |  |   |   |
|--|--|--|---|---|
|  | Effects from social pressure against the project   | _ Colleagues' unfavourable opinion toward the change   | _ Greater costs than benefits brought by the new system (4) | _ Informal discussions: "I do agree with others that if things start to go wrong, the cultural blame axis will point to us rather than the complexity of the project itself." (TRO) (Journal Entry 15 Jun 2013) |
|  | Loss aversion                                      | _ Losses loom larger than gains in value perception<br>_ Unknown future  | (Similar to above)  | N/A   |
|  | Cognitive misperception due to lack of information | _ Business-oriented staff do not understand the new system and/or hear about its benefits<br>_ Unfamiliar way of working | _ Lack of communication and/or involvement (2)              | _ Company documents: The deployment plan showed that internal communication will be given after the building and testing phase of the new system.   |

*Notes:* \_ The numbers in parentheses in the "link with other categories" column represent: (1) External environmental level; (2) Organisational level; (3) Group level; (4) Individual level.  
\_ N/A: Not available

#### **5.4. Findings at the action planning and taking phase**

The aim of this phase is to identify appropriate different change management strategies according to the reasons for resistance and how these strategies can be applied at the AlphaBank (Research Question 2.1 and 2.2). Different activities (i.e., one brainstorming session with the bank's top management, a meeting with the CEO, a workshop with the project team) were conducted during this phase. However, because the findings from the brainstorming session were highly related to the meeting with the CEO (in terms of strategy development), the findings of these two activities are subsequently presented in the same session.

#### **5.4.1. Brainstorming session and meeting with the CEO**

Previous research in organisational change management emphasise the importance of change agent sense-making of resistance (e.g., Thomas and Hardy, 2011; Ford et al., 2008) and the importance of top management commitment to the realisation of change processes (e.g., Aladwani, 2001; Pugh, 2007). Therefore, it was important to involve the management board of AlphaBank as many as possible in this activity. At that time, the diagnosis phase was finished and the board showed their interest in being informed about the findings and developing their further actions accordingly.

I (with agreement of the board) decided to run a brainstorming session. At the beginning of the session, the results from the diagnosis phase were presented to the bank's top management by me after an introduction by the CEO. The picture of causes of resistance was becoming clearer when the presentation was finished. In overall, the participants all confirmed that all aspects of resistance were sound and important to consider. Their specific learnings were that they underestimated what the process transformation implied and that they needed to view the CBS change from a much wider angle than a mere IT project, as one expressed:

“At the first sight, I thought that the organisational condition, such as its capacity to embed the change, was a major barrier that caused people to resist. However, according to these findings, so many issues are people-related...Not only task-oriented conflict but also interest-oriented conflict appeared as the bottleneck for the resistance.” (THD)

Or:

“We seemed to focus so much our attention on the technical side of the CBS change but we have neglected and ignored the equally importance of human dimension when implementing this change.” (QUD)

And the CEO commented that:

“Surely no bank enters into a CBS replacement project without facing different problems. However, the most important point is how we learn from our own lessons.” (DUT)

Since the presentation was only a skeleton, the first task of the brainstorming session was to work out in details what decision had to be made regarding the CBS change. Two different scenarios of the future state vision were examined, including: 1) Maintaining the status quo by staying with the current CBS and abandoning the change project; or 2) Rebuilding commitment to the CBS change and putting the project forward. In order to make a decision on these two scenarios, the Force Field Analysis suggested by Lewin (1951) was brought forward. After half an hour, different driving forces and constraining forces associated with the CBS change were plotted and discussed (see Figure 5.1). However, we found ourselves in a dilemma when proceeding to answer the “go or no go” question. As Luscher and Lewis (2008) explained, a dilemma creates a sense of paralysis or stuck-ness because it implies that a choice must be made between polarities (e.g., “go” or “no go”) in which each has high costs and/or risk as well as valued benefits. By unpacking one polarity (e.g., choosing the “go” decision), we were confronted with other issues (e.g., lack of physical resources), and vice versa. Such dilemma proved that the sense-making sub-session was valuable. In particular, it illustrated that the first and biggest barrier in managing resistance to change is to establish the top management commitment toward the realisation of change processes (Pugh, 2007). This was quite a challenge at that point until we figured out two important forces which involve “the capacity of the current CBS” and “the actual profitability of the CBS change”. In terms of the former, one member of the management board argued that:

“...Why do I say that the project cannot be postponed infinitely? It is because of the limited capacity of the 2-tier architecture system, which is probably around 100 to 120 units [branches]. If we reach that limit, we have to change the system no matter what happen.” (QUD)

Supporting this point, another added that:

“Over the last decade, our balance sheet has doubled in size. We have more customers and new lines of business...Hence, I agree that we need a new system that is scalable and flexible to enable us to develop.” (PHD)

Meanwhile, the latter was generated after a period of discussion and debate. In particular, there was a general consensus about the profitability of the CBS project

(e.g., enhancing the system's flexibility and reducing the operational and maintenance costs) because these were the initial driving forces for the CBS change:

“...I have no comment or question about its’ [the CBS change] benefits because they used to be the key drivers for starting the project.” (MAD)

And another explained these benefits more in-depth:

“Taking the processing cost for account opening as an example, this usually takes 20% of the total operational cost. If we decide to implement a smarter CBS, we could eliminate from 50% to 100% of duplicated activities for account opening. As a result, the total processing cost could be reduced by 7% to 13%.” (QUD)

However, it was debatable among the participants about whether it was the right time for changing:

“At the moment we are facing a lot of financial problems, both from internal and external sources. So we need to evaluate the project carefully.” (VID)

“Every change, including the CBS change under examination, carries risk. When is it ever right to change? I am afraid that that day never exists unless we need serious heads on to ultimately make it happen”. (LUD)

In order to get the participants away from the dilemma, the CEO decided to tell the participants what he really thought and felt at that time:

“The main point is whether we should see the CBS project from an expense point of view or an investment one. According to what we have discussed so far, I suggest that we should see it [the project] as an investment rather than an expense that needs to be cut over. Moreover, the results from our investments during the last two years indicate that it is no longer a wise move to invest in securities. So I believe that it is the time for us to consider the investment in IT as an option in our investment portfolio.” (DUT)

Instead of continuing postpone the CBS project or implement it without any intervention (accept continuing resistance and conflict), an intermediary solution was

to manage resistance accordingly before signing the contract with the appropriate vendor. In other words, the board expressed that it was important to resolve resistance situation and implement the CBS change in a modified way. Again, the CEO repeated how important the commitment to change is, and that he wanted the rest of the management board to make their commitment toward it. Following his words, all the participants were happy and eager to figure out the solutions. At that time, the needs for change were reinforced (by two forces mentioned above) and the management board were moved from the “denial” to the “awareness” stage as illustrated in Adam et al.’s (1976) transition curve.

**Figure 5.1: Force Field Analysis during the resistance sense-making sub-session**

|                     | <b>Enablers</b>   | <b>Blockers</b>  |
|---------------------|---|--|
| <b>Changing</b>     | <ul style="list-style-type: none"> <li>_ Meet the needs of future both in terms of customers’ requirements and the bank’s vision (e.g., be a top-five bank in Vietnam by 2015)</li> <li>_ Reduce the operations cost</li> <li>_ Reduce IT maintenance</li> <li>_ Increase customer acquisition</li> <li>_ Increase revenue per customer</li> <li>_ Enhance the system security</li> <li>_ Increase the scalability, agility and flexibility of the system according to the market requirements</li> </ul> | <ul style="list-style-type: none"> <li>_ High replacement costs (e.g., hardware and software, license fee)</li> <li>_ Restraining external environment (e.g., economy, politics/law)</li> <li>_ Business disruption due to the system change</li> <li>_ Lack of technical and managerial know-how of CBS replacement</li> <li>_ Inadequate training and support</li> <li>_ Insufficient and/or unsecured resources</li> <li>_ Lack of urgency for changing the “burning platform” (e.g., feasible of alternative technical solution, not fully understand the benefits of the new system)</li> <li>_ Fear of unknown brought by change</li> <li>_ Conflict of interest among organisational members (e.g., increase in workload, redistribution of power and resources)</li> <li>_ Staff satisfaction with the current system</li> </ul> |
| <b>Not changing</b> | <ul style="list-style-type: none"> <li>_ Cost savings on the project</li> <li>_ Avoid the implementation risk</li> <li>_ Leverage the benefits of existing system (e.g., existing modules, investment already incurred, current expertise)</li> </ul>   | <ul style="list-style-type: none"> <li>_ Unable to meet the future needs</li> <li>_ High operational and maintenance cost</li> <li>_ Difficult, and in some cases expensive, to add new features and/or modules</li> <li>_ Slow response to the market’s demand in terms of new product development</li> <li>_ Loose the market competition due to the aging system (e.g., slow transaction recovery time, heavy network load)</li> </ul>  |

*Notes:* \_ The driving forces are a sum of “enablers for changing” and “blockers for not changing”.

\_ The restraining forces are reflected via “enablers for not changing” and “blockers for changing”.

Once the top management commitment had been reinforced, the questions at that time were: What can be done to avoid the change recipients dropping out of the change process or preventing the attempt to change the current CBS from happening? What are specific proposed actions that need to do now? In order to answer these questions, we approached into the resolution brainstorming.

Literature about organisational change management also suggests that it is important to create employee commitment beside the top management commitment toward change (e.g., Kotter and Schlesinger, 2008; Vakola and Nikolaou, 2005). Lewin’s (1951) unfreezing stage in his three-stage model of organisational change illustrates a critical point that employees will only accept the change if there is some kind of confrontations or interventions. In this case, Kotter and Schlesinger (2008) put an emphasis on the role of organisational managers to create such confrontations or interventions through a strategic plan for dealing with employee resistance.

After explaining five brainstorming rules as suggested by Hargadon and Sutton (1997), the entire management board brainstormed to identify relevant proposed actions or strategic choices to deal with resistance at the AlphaBank. In total, the “resistance-action” list was generated with 33 proposed actions from 22 resistance items as illustrated in Table 5.2.

**Table 5.2: The “resistance-action” list generated from the brainstorming**

| Resistance items                          | Proposed actions   |
|---|--|
| _ Changes in market conditions            | _ Switch from the “peace-meal” approach into “big-bang” approach (1)<br>_ Set time-frame for the change in alignment with the defined deliverables (1) |
| _ Changes in business priorities          | _ Develop and unite the stakeholders’ commitment toward the new and shared vision (3)  |
| _ Large scale and long running IT project | _ Avoid focusing overly on customisations (e.g., technological and functional requirements) (1)<br>_ Allow for reasonable readjustment period (1)      |

|  |  |
|--|--|
| _ Feasible alternative solution  | _ Conduct a cost/benefit analysis to evaluate alternatives (6)   |
| _ The current system is still able to fulfil the bank's requirements in an acceptable manner                                     | _ Make the results of change visible (2)   |
| _ Implementation risk  | _ Hire consultants (4)<br>_ Reuse others' successes (1)<br>_ Adopt well-known approaches (e.g., IBM's CBS replacement model) (1)   |
| _ Requirement for the participation of many departments  | _ Make use of current available communication channels (e.g., email, regular meetings) (2)   |
| _ Lack of a suitable project leader with power and prestige  | _ Develop an ambidextrous leadership style with dual abilities (e.g., technical skills and reflective skills) (4)<br>_ Assign a co-project leader to overcome another's weaknesses (6) |
| _ Lack of experience for solving complex problems of the system replacement  | _ Train or retrain staff (4)   |
| _ Lack of securing funds and high replacement cost   | _ Do "on the cheap" (e.g., doing the testing by internal staff instead of hiring a consultant company) (6)   |
| _ Different education background between IT and business-oriented staff  | _ Develop collaboration and learn to work across departments (4)<br>_ Be receptive to complaints following conversion to maintain staff contact and trust (4)                          |
| _ Lack of involvement of various stakeholders, especially operational staff, due to the vertical handoff decision making process | _ Combine the "top-down" approach with the "bottom-up" approach (3)  |
| _ Depend on the chosen vendor for training   | _ Train a small group (e.g., the project team) to lead the change (4)  |
| _ Lack of established channels for interchange and discussion  | _ Establish new communication channels (e.g., project wall, forum, internal newsletters or magazines) (2)  |
| _ Difficult to establish a reward structure for the project team at the early stage of the project                               | _ Start readjusting the reward system (5)<br>_ Alter job titles to reflect increased responsibility (5)  |



|  |  |
|--|--|
| _ Conflict of interest due to the increase in workload, redistribution of power, and reallocation of resources                                     | _ Change the work schedule to be more appropriate (4)<br>_ Offer incentives (e.g., higher wage rates) to compensate for the perceived losses (5)<br>_ Design separate performance measures and/or bonus-and-earn system for the affected group (5) |
| _ Usefulness and ease of use of the current system   | _ Communicate the need for and logic of change (2)   |
| _ High relative costs for changing (in terms of time, money, and efforts) and low relative benefits that cannot compensate for the costs or losses | _ Provide job counselling and organise group therapy to help employees adjust (4)  |
| _ Colleagues' unfavourable opinion toward the change   | _ Initiate discussions and/or exchanges about experience and problems (2)  |
| _ Losses loom larger than gains in value perception and unknown future   | _ Focus on the benefits of change (e.g., enhancing future job performance) (2)<br>_ Create and encourage a feeling of change ownership among stakeholders (3)  |
| _ Business-oriented staff do not understand the new system and/or hear about its benefits  | _ Communicate the plans, problems, progress, and results (2)<br>_ Increase empowerment and/or stakeholders' involvement in the change (3)  |
| _ Unfamiliar way of working  | _ Document standards so new procedures are easy to learn and reference (4)   |

*Note: The numbers in parentheses in the proposed action table denote the strategy to which the proposed action belongs (see Table 5.3). In particular, they represent: (1) Timing strategy; (2) Communication strategy; (3) Participation strategy; (4) Facilitation strategy; (5) Negotiation strategy; (6) Manipulation strategy.*

Because the identified strategic choices varied and they were mainly based on the participants' practical experience, we did not have any specific classification at that time to categorise them. Therefore, the classification was depended on me after the brainstorming as discussed in Section 4.4.2. In order to save space and easy to follow, the classification which was developed later (prior to the meeting with the CEO) was applied here to present and discuss the results. The qualitative assessment

of the board on each specific strategic choice is summarised in the “Advantages” and “Drawbacks” columns as in Table 5.3.

*Timing strategy:* Although choosing the right time for the introduction of the project and delivering the project on-time tactically to manage organisational change is vital, it is often neglected in thinking about strategic change (Johnson et al., 2005). At the diagnosis phase, it was found that any large scale and long running IT project (e.g., the CBS change) is more likely to experience not only significant changes in market conditions (e.g., economic, political/laws) but also within the organisation (e.g., changes in business priorities, changes in requests). Researchers (e.g., Mento et al., 2002; Pugh, 2007), including most notably Mintzberg et al. (2005), have offered a critical perspective on strategic management in rapidly changing environment, and that, the first and important key element influencing the content of change management strategies is the environmental characteristics. According to Mintzberg et al. (2005), the environmental school of thought helps to bring the overall view of strategy formation into balance, by positioning environment as one of the three central forces in the change process, alongside leadership and organisational characteristics. Perhaps it is true in theory as well as in practice. For the fact is that all participants confirmed that changes in the environment created a mismatch between the existing internal capabilities and the new environment and, therefore, they considered the minimisation of time in strategic change, specifically for a large scale and long running IT project, as crucial to the success. According to the participants, although the strategic options in this category had their own drawbacks, they could help the AlphaBank to overcome today’s rapid change business environment and, as a result, avoid the misalignment which was partly due to the lagging time. Moreover, as one director (TOD) argued, “stretching the CBS project over a much longer period could lead the bank into another problem in which the new system is no longer modern and quickly become a victim of legacy”.

However, when considering the degrees of effectiveness of the options within timing strategy, one concern from the board was that these strategic options would produce contradictory effects on others (i.e., communication, participation, and negotiation), especially for the “switching from the peace-meal approach into big-bang approach” option which was not considered as the board’s priority (with group sum of 3).

According to them, this option seemed to ignore the complexity of the CBS, the risk and conflicts involved, and the importance of communication and participation of their staff in handing this major project. For instance, as commented by one director (PHD), “choosing this [big-bang] alternative is just like we add fuel into the fire because we will bypass all other issues”.

Another concern of the board involved “avoid focusing overly on customisations”. Whereas this option could help them to save time on the project and avoid risk brought by customisations, it would generate conflict of interest for the affected group due to their losses of operational modules. Yet, this option was still considered as group priority, not only because of the importance of the causes of resistance associated with it (i.e., misalignment between the project and organisational strategic plan) but also because of its acceptable feasibility. First, the board believed that group conflict associated with the losses of modules could be compensated by designing separate performance measures for the affected group (or using negotiation strategy). Second, it was argued that this type of conflict was partly due to their staff’s low perceived benefits of the CBS change because they did not see the need for change. Hence, “once the need for change is reinforced by taking the limited capacity of the current CBS as another driver for change [by using communication strategy], they will understand that we all are put under a real danger and they will change their views or behaviours” (DUT).

Communication strategy: Change in business often brings uncertainty. With the CBS replacement, the need to communicate the benefits to the stakeholders it will affect is essential. As Rogers (1995: 35) put it, “Communication is a process in which participants create and share information with one another in order to reach a mutual understanding...[Therefore] an individual can reduce the degree of uncertainty by obtaining information”. During the brainstorming session, it was agreed that communication should not be used as a simple mechanism to inform the stakeholders after the CBS implementation. Instead, it should be seen as an important strategy prior to the change to deal with resistance. Particularly, “communicating the new system’s benefits, rather than its attributes, will draw the stakeholders’ attention and realisation of the need for change”, as one participant (MAD) argued. Aladwani (2001) also emphasised this point by explaining that employees are often reluctant to

welcome the new system if they do not know what the new system can deliver to the organisation and its workers. In this case, communication strategy could help to build trust across the bank and move the stakeholders from the denial stage into the awareness stage. Another importance of communication strategy was that it could be seen as a two-way process to leverage the organisational learning. Feedback on communication was seen by the bank's top management as contributing to both the development of a better implementation plan as well as the risk management process, particularly for the highly complex and complicated project. Similar to the education strategy suggested by Pugh (2007), communication strategy in this case exhibits characteristics like a problem-solving approach using the input of the change recipients as an assessment of the way the change is affecting the organisation. By focusing on the importance of feedback on communication, the proposed actions associated with communication strategy (e.g., making use of current available communication channels to promote the participation of many departments; initiate discussions and/or exchanges about experience and problems to understand the staff's unfavourable opinion) might be seen to overlap with participation strategy because these proposed actions would create the opportunity for the change recipients to express their concerns. Nonetheless, due to such overlap between communication and participation strategy, these two strategies would bring the same issue down the line as discussed in the following paragraph.

*Participation strategy:* Instead of “flipping a coin” to decide whether the change management process should be top-down (e.g., centralisation and exclusion) or bottom-up (e.g., decentralisation and inclusivity), Mintzberg et al. (2005) figured out an important point that the choice should depend on the practitioners' understanding of what is broken in their own organisation before deciding how to fix it. In the present study, it was found at the diagnosis phase that the bank's top management had failed to create the buy-in from the non-managerial employees, especially the business-oriented staff. This cause of resistance indicated that although senior managers favour the concept of empowerment in theory, they in reality tend to prefer the command-and-control model that they seem to trust and know best (Argyris, 1998).

During the brainstorming, the bank's top management had quite strong mind-sets about the need for participation. Some of them believed that the involvement of different stakeholders should be avoided because it would actually slow down the CBS change and create confusion in their decision making process (or conflict with the timing strategy). However, the majority argued that managing a large scale project such as the CBS change should be open and inclusive so that the information-gathering from the tendency would help to identify and address the change recipients' issues early. As one director (MAD) put it, "lack of involvement of our stakeholders tends to add risk to the project and, if we don't change our ways of thinking, can waste more our time and money at the later stage". Hence, the findings on the importance of various stakeholders' participation are in line with the literature of change management (e.g., Kotter and Schlesinger, 2008; Pugh, 2007) in the sense that participation strategy helps to lead to commitment (not merely compliance) and that, the classical approach which sees the organisational change management as a top-down process is becoming less logical procedure in practice.

*Facilitation strategy:* As Woodward and Hendry (2004) argued, developing employees' skills and competencies is helpful in enabling the change recipients to absorb and cope with change. It is certain that no organisation nowadays enters into a change project without realising the importance of being supportive such as providing training to obtain new skills, changing the work schedule, providing job counselling, and/or listening to complaints. It was not an exception here at the AlphaBank. The bank's top management generally acknowledged the importance of organisational supports, especially education and training to generate their new internal capabilities necessary to manage resistance to the CBS change. For instance, they agreed that they would probably go back to their old ways of doing things without education and training. However, the main obstacle that prevented them to do so from the beginning was their expertise on providing training. As one member of the board explained, "we have expertise on running a bank, but not on a CBS replacement. That's why we depend on the chosen vendor for training" (QUD). Given this, the questions during the brainstorming shifted from "Whether it is necessary to provide training?" to "Whether a training programme provided later by the vendor is sufficient?" and "Whether the bank should bring in outsiders with specialised expertise?". Regarding these concerns and the causes of resistance

identified, the suggested actions included not only providing additional adequate training but also hiring outside consultants to provide group or individual assistance as needed. Nevertheless, the “hire consultants” option to manage the project’s “implementation risk” was not supported by the board when evaluating its effectiveness because of lack of inside knowledge of the outsider. For instance, as one member (MAD) argued, “if the project manager is not from the inside or even the banking industry; the insight, communication, and foresight will be missed”. Moreover, “he or she will also have issues when taking control of the project as a new entrant”, as added by another member (TOD). Meanwhile, although the training options (e.g., train the project leader, a small group to lead the change, or staff) were considered as feasible according to the bank’s financial capability, their degrees of effectiveness varied depending on the scale of training (e.g., number of staff involved) due to the bank’s difficulty in cash flow. Therefore, other options (e.g., “develop collaboration and learn to work across departments, “be receptive to complaints following conversion to maintain staff contact and trust”, or “change the work schedule to be more appropriate”) were perceived as more cost-effective by the board and as essentially needed to allow the change recipients performing their new roles.

In terms of leadership, there was a consensus agreement that a project leader who had experience in the CBS transformation in the past was likely to be far more valuable than anyone who had been through a short training programme. However, according to the findings at the diagnosis phase, the bank’s top management realised that an appropriate leader should go beyond his technical skills (e.g., ability to achieve the IS objectives, ability to deal with followers’ fear of the CBS change) by obtaining special skills (e.g., making sense of complexity, motivating a variety of people, building trust and network). Similar to “ambidextrous leadership” termed by Byrnes (2005), leading a large scale IS project calls for a leader who is not only able to “do a good job of doing what always was done” but also to “reflect on the current paradigm, find ways to fundamentally improve it, and manage the large-scale change to a successful conclusion” (p. 3). In this case, developing an ambidextrous leadership style with dual abilities (e.g., technical skills and reflective skills) was seen by the board’s members as another important strategic option in this category.

*Negotiation strategy:* It was found from the change recipients at the diagnosis phase that there was no specific reward policy to motivate them to adopt new behaviours necessary to embrace the CBS change. Moreover, conflict of interest due to the increase in workload, redistribution of power, and reallocation of resources also appeared as the main causes of resistance. According to the board of management, these issues even became more critical when the resisting group were the people they needed the most to implement the change. In order to manage these issues, offering incentives to active or potential resistors was identified as vital for a long change effort by the board. Suggested possible strategic options included “start readjusting the reward system”, “alter job titles to reflect increased responsibility”, “offer incentives (e.g., higher wage rates) to compensate for the perceived losses”, and “design separate performance measures and/or bonus-and-earn system for the affected group”. Although the level of consensus within the board was not high about these options due to the difficulty to readjust the reward system at the pre-implementation stage or the probability to lead back to the conflict of interest if not carefully designed, the majority of the board argued that these options would be an efficient way to guarantee the fairness of the CBS change. “It’s fair to compensate for any extra effort. This change is all about the bank and our staff and, therefore, we don’t want them to see the change as a ‘pushing’ decision against their deserved benefits”, as one member (DUT) commented. In this regard, the proposed actions under this category are consistent to the argument made by previous researchers (e.g., Kotter, 1995; Mento et al., 2002) in a sense that it is very difficult to keep the change recipients self-energised if they do not see any tangible benefit or reward corresponding to their levels of effort. From the perspective of Mintzberg et al.’s (2005) power school of thought, these strategic options can be seen as a process of negotiation between the organisation and its stakeholders to break through the obstacles of conflict of interest to necessary change.

*Manipulation strategy:* According to Kotter and Schlesinger (2008), in some situations, it is needed for managers to covert attempts to influence the resistors. Manipulation, according to them, normally “involves the very selective use of information and the conscious structuring of events” (p. 6). Oliver (1991: 157) makes this strategy clearer by defining manipulation as the purposeful and opportunistic attempt to co-opt, influence, or control institutional pressures and evaluations”.

In response to the lack of a suitable project leader with power and prestige, one quickly and highly effective strategic option suggested by the board was to “assign a co-project leader to overcome another’s weaknesses”. The intended effect of this co-optation tactic, in fact, was supposed to neutralise the opposite pressures on the project leader as well as gain support from the change recipients. Hence, it is not a form of participation as discussed previously.

Another strategic option in this category to deal with the “lack of securing funds and high replacement cost” was to “do on the cheap” (e.g., doing the testing by internal staff instead of hiring a professional testing company). Considering the effectiveness of this proposed action brought one major issue down the line that was the “implementation risk” involved. As one member (VID) explained, “when approaching to testing, there may be some areas where working with specialists will help to avoid any disaster before the ‘go-live’ stage”. Yet, when it came to the discussion involving testing, there was a high tendency among the board to work with internal staff. As another (MAD) argued, “...but at the end, specialists won’t be able to test everything [e.g., end to end functionality testing] due to their lack of knowledge of our existing system”. “Besides expensive testing, we have to be able to respond quickly to any problem after go-live and, therefore, taking over this part and building an internal team with knowledge of the new system is important. Providing a short training may be needed [using facilitation strategy] but this option is achievable [according to the staff’s testing experience] and cost effective” (QUD). In overall, although it was recognised by the top management that a CBS replacement was very expensive, they all believed that trying to keep the implementation cost to a minimum was seen as useful for developing others’ strong feelings toward accepting the new system and helping the bank survive in its current competitive environment. Unlike the co-optation tactic above, the objective of this controlling tactic was to dominate (e.g., attempt to control the budgetary processes) rather to neutralise or influence organisational sources or processes (Oliver, 1991).

The last strategic option, which can be seen as “influence tactic” in Oliver’s (1991) terminology, was to “conduct a cost/benefit analysis to evaluate alternatives” (e.g., middleware solution versus core replacement solution). This tactic was directed toward the organisational criteria by which feasible alternative solutions could be



evaluated. Thus, the manipulation was supposed to be reflected in the efforts of applying an analytical technique to rationally influence the stakeholders' perception of the CBS change. Nevertheless, although this option was seen as group priority, the requirements for full information were a problem that decreased the effectiveness of this option. "This [option] is feasible but will be time-consuming. Furthermore, in order to win the contract, the vendors often convince their customers that signing the contract would deliver the expected value or even present their financial solutions as a panacea with untrusted or untested information. We can use their provided information for our analysis but care must be taken", as one member (QUD) asserted.

**Table 5.3: The strategy sheet presented during the meeting with the CEO**

| Strategy                   | Proposed actions  | Causes of Resistance |                     |                      |                 | Group Sum | Advantages  | Drawbacks   | Group Priority |
|----------------------------|---|----------------------|---------------------|----------------------|-----------------|-----------|---|---|----------------|
|                            |   | External Constraints | New IS Misalignment | Conflict of Interest | Status Quo Bias |           |   |   |                |
| <b>Timing Strategy (1)</b> | _ Switch from the “peace-meal” approach into “big-bang” approach                            | √                    |                     |                      |                 | 3         | Faster implementation cycle; “Quick win” results  | Higher risk; Lower error tolerance level                          | X              |
|                            | _ Set time-frame for the change in alignment with the defined deliverables                  | √                    |                     |                      |                 | 7         | Avoid delays in the project duration; Create a sense of responsibility toward the project           | Evoke a feeling of stress and anxiety; Affect the quality of work | √              |
|                            | _ Avoid focusing overly on customisations (e.g., technological and functional requirements) |                      | √                   |                      |                 | 5         | Save time on deciding technical and functional requirements; Lower risk when the new system go live | Sacrifice some business requirements (e.g., modules and features) | √              |
|                            | _ Allow for reasonable readjustment period  |                      | √                   |                      |                 | 6         | Generate positive and proactive attitude toward change  | Slow down the change processes if not reasonable                  | √              |
|                            | _ Reuse others’ successes   |                      | √                   |                      |                 | 7         | Avoid disaster; Save time on problem-solving  | Probability of not being suitable in the current context          | √              |
|                            | _ Adopt well-known approaches (e.g., IBM’s CBS replacement model)                           |                      | √                   |                      |                 | 6         | Bring “business clarity”; Save time on planning   | Requirement for modification when adopting and applying           | √              |

|                                   |   |  |   |  |   |   |  |   |   |   |
|-----------------------------------|---|--|---|--|---|---|--|---|---|---|
| <b>Communication Strategy (2)</b> | _ Communicate the need for and logic of change  |  |   |  | √ | 8 | Draw stakeholder's attention and realisation for change; Create a sense of urgency | Create the chaos from unrealistic employees' expectation                  | √   |   |
|                                   | _ Make use of current available communication channels (e.g., email, regular meetings)                |  | √ |  |   | 7 | Can be used immediately; Staff familiar with current available channels            | Staff may use communication to disagree or argue with the need for change | √   |   |
|                                   | _ Establish new communication channels (e.g., project wall, forum, internal newsletters or magazines) |  | √ |  |   | 6 | Enhance "frequency and quality" of communication                                   |   | √   |   |
|                                   | _ Initiate discussions and/or exchanges about experience and problems                                 |  |   |  |   | √ | 5  | Can be used as a problem-solving approach to assess the effect of change  | Time-consuming, especially for multifaceted problems                              | √ |
|                                   | _ Focus on the benefits of change (e.g., enhancing future job performance)                            |  |   |  |   | √ | 8  | Remove the status quo bias  | Create a feeling of anxiety if the benefits of change are not true and/or visible | √ |
|                                   | _ Communicate the plans, problems, progress, and results  |  |   |  |   | √ | 7  | Build trust across the organisation                                       | Time-consuming, especially for multifaceted problems                              | √ |
|                                   | _ Make the results of change visible  |  | √ |  |   |   | 6  | Effective way to "pull" the stakeholders toward change                    | Requirements for full information – sometimes it is "easier said than done"       | √ |

|                                   |   |   |   |   |  |   |   |   |   |
|-----------------------------------|---|---|---|---|--|---|---|---|---|
| <b>Participation Strategy (3)</b> | _ Develop and unite the stakeholders' commitment toward the new and shared vision                             | √ |   |   |  | 8 | Move the entire organisation as a whole toward change; Create the "buy-in" from the staff; Help to identify and address the change recipients' issues early | Slow down the change; Create confusion in the decision making process                   | √ |
|                                   | _ Combine the "top-down" approach with the "bottom-up" approach   |   | √ |   |  | 5 |   |   | √ |
|                                   | _ Increase empowerment and/or stakeholders' involvement in the change   |   |   | √ |  | 5 |   |   | √ |
|                                   | _ Create and encourage a feeling of change ownership among stakeholders                                       |   |   | √ |  | 6 |   |   | √ |
| <b>Facilitation Strategy (4)</b>  | _ Hire consultants  |   | √ |   |  | 4 | Bring expertise from outsiders  | Costly; Lack of knowledge from inside   | X |
|                                   | _ Develop an ambidextrous leadership style with dual abilities (e.g., technical skills and reflective skills) |   | √ |   |  | 7 | Generate new internal capabilities; Enable staff to absorb and cope with change   | Expensive; Time-consuming; Requirements for expertise on training for a CBS replacement | √ |
|                                   | _ Train or retrain staff  |   | √ |   |  | 5 |   |   | √ |
|                                   | _ Develop collaboration and learn to work across departments  |   | √ |   |  | 8 |   |   | √ |
|                                   | _ Train a small group (e.g., the project team) to lead the change   |   | √ |   |  | 6 |   |   | √ |
|                                   | _ Be receptive to complaints following conversion to maintain staff contact and trust                         |   | √ |   |  | 7 | Build trust across the organisation   | Time-consuming; Slow down the change process  | √ |

|                                  |  |  |   |   |   |   |   |   |   |
|----------------------------------|--|--|---|---|---|---|---|---|---|
|                                  | _ Change the work schedule to be more appropriate  |  |   | √ |   | 8 | Useful for adjustment problems; Build up confident among the change recipients  |   | √ |
|                                  | _ Provide job counselling and organise group therapy to help employees adjust              |  |   |   | √ | 5 |   |   | √ |
|                                  | _ Document standards so new procedures are easy to learn and reference                     |  |   |   | √ | 7 |   |   | √ |
| <b>Negotiation Strategy (5)</b>  | _ Start readjusting the reward system  |  | √ |   |   | 6 | Relatively easy and efficient way to solve the conflict of interest (e.g., compensation) as well as create the staff's motivation to complete their tasks | Costly; Difficult to readjust the reward system at the pre-implementation stage; Notify others to negotiate for compliance; Lead back to the conflict of interest if not carefully designed | √ |
|                                  | _ Alter job titles to reflect increased responsibility                                     |  | √ |   |   | 6 |   |   | √ |
|                                  | _ Offer incentives (e.g., higher wage rates) to compensate for the perceived losses        |  |   | √ |   | 7 |   |   | √ |
|                                  | _ Design separate performance measures and/or bonus-and-earn system for the affected group |  |   | √ |   | 6 |   |   | √ |
| <b>Manipulation Strategy (6)</b> | _ Assign a co-project leader to overcome another's weaknesses                              |  | √ |   |   | 8 | Quickly solve the issue of leadership; Neutralise the opposite pressure and/or avoid the task overload on the current project leader                      | Requirements for cooperation, coordination, knowledge and responsibilities sharing  | √ |

|  |   |  |   |  |  |   |   |  |   |
|--|---|--|---|--|--|---|---|--|---|
|  | _ Do “on the cheap”<br>(e.g., doing the testing<br>by internal staff) |  | √ |  |  | 5 | Develop the<br>stakeholders’<br>positive feelings<br>toward change;<br>Help to survive in<br>competitive<br>environment | Probability of<br>leading to disaster<br>due to the time and<br>expertise issues | √ |
|  | _ Conduct a cost/benefit<br>analysis to evaluate<br>alternatives      |  | √ |  |  | 6 | Can be used to<br>rationally influence<br>the stakeholders’<br>perception of the<br>change                              | Time-consuming;<br>Requirements for<br>full information                          | √ |

*Note:* \_ The proposed actions are grouped by strategy according to the numbers in parentheses as in Table 5.2

\_ The associated causes of resistance to be addressed are decided by the level of analysis at which they emerged as in Table 5.1

\_ Group Sum represents the number of votes of the top management (Max = 8) on:

(1) The degree of importance of resistance item

(2) The degree of effectiveness of associated proposed action

\_ Group Sum with the point value of five or above is considered as Group Priority

Once the appropriate resolution actions had been created and evaluated, I decided to shift the focus from strategy creation to strategy implementation, as suggested by Kaplan Norton (2001). In other words, because the essence of this research is to take actions in order to change the current situation (e.g., resistance to the CBS change) at the AlphaBank, it is necessary to get the client participants' approval on the planned actions before being implemented (Davison et al., 2004). When approaching to strategy implementation, the top management explicitly believed that although the speed of proposed actions needs to be taken into account, it needs to be balanced with the amount of "things-to-do", the degree level of involvement of stakeholders, and key situational variables at the AlphaBank. For example, as the CEO stated:

"We all realised the importance of empowerment and decentralisation for a large scale change process. However, if we aim to involve our staff in this change but, at the same time, require for a quick strategy implementation, our change efforts will become either delayed or less participative. Instead of being in a bind, I think it is probably best for a slower implementation process to eliminate any resistance...Our past mistake was that we jumped into the CBS change so quickly, with little involvement of others." (DUT)

From a situational point of view, another member of the board added that:

"We are facing cash-flow difficulty and resources constraints at the moment. So, for instance, although training was considered as a prioritised strategic option to reduce employees' resistance to the CBS change, it is not the right time to provide a massive training to our staff for some economic reasons." (VID)

Given these concerns, one member of the board suggested the "Think-Feel-Do" model for assessing which priority would be taken first and we all agreed on the usefulness of this model in our current context (see Section 4.4.1 for discussions). At the end of the brainstorming, all the board members embraced the results of the brainstorming and felt a strong sense of achievement, as one said: "I was pleasantly surprised because you figured out a lot of critical problems and solutions."

A separate meeting with the CEO was held one week after the brainstorming. On the basis of the strategy sheet, he agreed to cover firstly third of the prioritised strategies (i.e., communication and participation strategies), focusing on the cognitive component of the change recipients' attitudes. During the meeting, he expressed his positive outlook toward the planned strategies. He for example said that: "This [strategy sheet] is very useful in a sense that it helps us to set the ground floor solutions for moving forward. However, as the ground floor solutions, a lot of planning and works still have to be done". Meanwhile, he also expressed that winning over the project team and helping them to manage resistance was fundamental to the success of the project. "The challenge we are confronting is that the people [the project team members] we need most are those who fear of the change, simply because of heavy responsibilities on their shoulders", as he said. Therefore, a workshop with the project team was subsequently carried out.

#### **5.4.2. Workshop with the project team**

The aims of the workshop were to: 1) Inform the project team about the findings at the diagnosis phase and the top management's commitment on the "go" decision; 2) Create a personal concern about their responsibility to support the CBS change and act as resistance aware during the project; 3) Present them the strategy sheet which could be applied in their particular context.

The workshop started with the presentation about the findings on the causes of resistance and then turned to the reasons why the top management made their commitment on the "go" decision. Until this time the reason for the CBS replacement was considered as not urgent, but now it was apparent among the project team that the existing system did not either support the bank's market development (e.g., due to the limited capacity of the current CBS) or enhance the staff's job performance. To back up these assertions, information on the differences between 2-tier architecture and multi-tier architecture (Simcrest, 2013) and the value for switching to a modern core banking (IBM, 2012) was given during the presentation. When the IT and Finance Directors (who had attended the brainstorming session) nodded several times to support the assertions, my presentation at that time was



followed attentively, as facial expressions and gestures of the other participants showed (Journal Entry, 22 Jan 2014).

In order to create a personal concern about the participants' responsibility to support the CBS change and act as resistance aware during the project, I then spent much time during the workshop to explain what Pugh (2007) told about a personal self-awareness. In particular, it was stressed in the workshop that a personal self-awareness does not only involve the honest assessment of one's limits but also the understanding of the others' limits or feeling during a change initiative. By developing this skill of self-awareness, it could help the team members "indicate where an intervention is necessary" and "also act as a very necessary calming influence" on themselves (p. 195). Moreover, exploring the others' feeling could help them get in touch with their empathy for the others' situation and, as a consequence, assure the acquirement of information about where others see the problems in change.

According to Pugh (2007), managing resistance to the CBS change, however, does not stop there since the expression of each party's problems is just the first part for managing resistance and serves as input data. I subsequently presented and explained them the strategy sheet which could be applied in their particular context. Intensive discussions among the participants had taken place afterward. Their overall comment was that the basic idea and the strategic sheet were appeared to be useful and they were happy with the proposed plan, as I could observe some smiling faces at that time (Journal Entry, 22 Jan 2014). In addition, they suggested that it would be better if I documented the framework in a way that would allow them to add either resistance items or proposed actions continuously as these items would probably arise during the change process. Yet, this showed that there was still work to do to manage resistance. At the end of the workshop, the project team members were invited to provide their feedback, but no further feedback was made except one that: "From now, we are supposed to follow the CBS change process with a wait-and-see attitude". This comment meant that it was fine for them to know that they would obtain more detailed plans via relevant department directors. On the other hand, it also meant that although the resolution plan was noticeable, the team members' trust toward these proper resolutions was still easy to be broken because they were

following the CBS change with a “wait and see” attitude. Nevertheless, the project team members felt informed and, indeed, affected at the end of the workshop. Therefore, it caused a feeling of responsibility among them to make the CBS change happen.

### **5.5. Findings at the evaluation phase**

This phase aimed to investigate the outcomes of the resolution actions which had been taken later by the practitioners to manage resistance toward the CBS project (Research Question 2.3). As discussed in Chapter 1, the work with exploring and developing the framework which helps the practitioners to appreciate different areas causing resistance and possible strategies to deal with the resistance issues is the ultimate purpose of this research. Hence, the staging of the practical operational plans was negotiated as the responsibility of the members of the organisation. It is important that the organisation does not distribute these tasks to me, and in fact they did not. One of the reasons is that the members at the AlphaBank are the real experts in the areas of their daily work tasks. Hence they should be the ones who design and implement the strategic detailed plans. Another reason, perhaps the most important, is that their knowledge about understanding and managing resistance toward the CBS change had been enhanced after different activities during this study (i.e., brainstorming session and workshop). It is therefore necessary for the practitioners to obtain the competence required to manage the resistance issues by themselves and keep up with continuous development work based on broad participation with limited supports from the outsiders.

Prior to the evaluation phase, I only took a role as backstage supporter (e.g., coaching on how to interpret the strategy sheet and giving comments on the activities to create). Although I did not directly facilitate the intervention, contacts were maintained with two directors who were responsible for improving project management via email to ensure that we were on the right track. During the process, one discussion made with the directors was that the proposed strategic options (e.g., “communicate the need for and logic of change” or “develop and unite the stakeholders’ commitment toward the new and shared vision”) should focus on both selling the value of the bank’s future vision (e.g., the benefits of change) and helping

the stakeholders to see the danger for maintaining their status quo (e.g., their future jobs security). As Kotter (2008: 120) argued, “even people who are most solidly content with the status quo will begin to act differently if a fire starts on the floor beneath their feet”. Another discussion involved the decision on the primary outcome indicator for measuring the overall impact of our interventions as provided in Section 4.5.

Since I took a role as backstage supporter, the reviewing session started with questions aiming to clarify and increase my understanding of the implemented activities (e.g., What activities had been taken place?; How and why did those activities come about?; What are the aims of those activities?) as suggested by Love (2004). According to the participants, different activities coming out of the strategy sheet were staged on the ground. After one month since the workshop, two different activities covering the communication and participation strategies were in place in February, 2014. The first activity involved the establishment of colourful e-newsletters via the intranet to keep every staff with specific information about the CBS change project; such as the bank’s vision toward the investment on a modern CBS, the need for and logic of this CBS change, the issues which are likely to affect each group of employees on their personal level, the benefits of change not only at the organisational level (e.g., profits generated from the project) but also at the individual level (e.g., reduction in duplicate job activities, enhance job performance):

“The bank aims to keep every staff regularly updated with specific information about the CBS change project. Every first Monday morning of the month the marketing department distributed a colourful e-newsletter via the intranet. We [marketing staff] have been working closely with technical staff, especially system analysts who have both IT and business knowledge, for issuing these monthly e-newsletters. Four issues of the e-newsletters [up to June, 2014] have been done and comments received via email showed that people started to be enthusiastic about the CBS project.” (MAD)

Another activity involved the establishment of an online discussion forum where the bank’s staff across different departments or branches meet to solve the issues associated with the CBS project:

“We decided to create an online discussion forum as part of our communication and participation strategies. For the project team members, this is a place where we work collaboratively to redefine our technical and functional requirements or exchange about experience and problems. For others [the rest of the staff], this is a place where they can find specific information about the project as well as provide their feedbacks or suggestions.” (QUD)

In terms of what aspects of those activities helped the bank’s staff to commit to the CBS change project, both participants agreed that communicating the need for and logic of this CBS change was really an important factor that helped to create a sense of urgency among stakeholders. One participant explained that:

“The bank’s staff used to lack clarity about the urgency of the CBS project or even express suspicion about the real purpose of this change effort. However, responses about current views of the project indicated a sharp contrast to their reactions on the very first day of the interventions. We all recognised the current worth for implementing a modern CBS as well as how a thousand cuts [operational and maintenance costs] caused by the old system can lead to the organisation’s death.” (QUD)

Meanwhile, it was also expressed that openness to share detailed information as well as focusing on the effects of change was considered as another success of those activities:

“Instead of providing employees with general project information, our openness to share detailed information about the project such as benefits and problems others may face helped us to generate feedbacks from them. Therefore, we are becoming clearer about what kinds of support are necessary.” (MAD)

Finally, both participants stressed that creating and encouraging a feeling of change ownership among stakeholders helped not only to transfer skills and knowledge across the AlphaBank, but also to reduce their resistance by giving them the opportunity to participate in the decision making process:

“The responses received from those activities [e-newsletters and online discussion forum] helped us to distinguish between ‘wish-list’ and ‘must-haves’ of a new system. For instance, the responses generated subsequently helped us to de-scope some less-important functionality that was planned to insert.” (QUD)

“By broadening the information flow and encouraging the involvement, we all recognised that we are sharing a common fate and facing similar problems.” (MAD)

However, there was a consensus agreement from the participants that the provision of information and empowerment was not sufficient for releasing the staff’s resistance, as the participants explained:

“It is dangerous that we are trying to persuade those who really had a problem not involving the need of information that we understand their problems but no action is going to be taken. This could affect others’ perception toward the CBS change as unfair.” (MAD)

“The negative sign of the interventions was that the number of complaints also increased as a foreseen consequence. Most of complaints came from the IT staff, especially the programmers who were threatening to quit due to the increase in their workload.” (QUD)

In this case, both participants suggested that the resistance management process could not be continued by simply focusing on the communication and participation strategies. Indeed, at a meeting one week before this reviewing session, the participants had successfully convinced the bank’s top management to hire an external consultant company to readjust its reward system, create their supports in terms of offering incentives (called the project salary) for the project team members and change the work schedule to be more appropriate for the programmers (e.g., relieving penalties associated with missing deadlines, flexible work schedule). Again, both participants found the strategy sheet generally useful for appreciating different areas causing resistance and possible strategies to deal with the resistance

issues, but found the advantages and drawbacks particularly useful for foreseeing consequences of each resolution action.

In overall, although the initial outcomes were considered to be mixed, the participants agreed that the resistance management project showed much positive change. In particular, the results from forum analytics indicated that participation in the online discussion forum (a place where every staff could get specific information about the CBS change project as released in the e-newsletters, leave their feedbacks or comments, and discuss any issue associated with the project) increased greatly from few dozen visitors to 1,018 visitors on the 25<sup>th</sup> of June, 2014 (equivalent to 72 percent of engagement across the AlphaBank). As previous researchers (e.g., Burnes, 2009; Pugh, 2007) proposed, communication and employee involvement was key for dealing with resistance. Moreover, the high level of engagement in this case also proved vital because it illustrated a degree of comfort with conflicts or tensions embedded in the organisational change process (Luscher and Lewis, 2008). Given these satisfactory results, we (i.e., the practitioners and I) all agreed that although there was still work to do as the resistance management process should be seen as a continuous process, the proposed approach was in stable and useful form and, therefore, we decided to close this research at that point of time.

Back to the aim of this phase involving the question of what were the outcomes of the resolution actions, it is clear that this question cannot be answered satisfactorily by the few remarks that I have presented above. Moreover, it is by no means that I can get a fully answer for this question because I have hardly touched upon the very-end outcomes of this resistance management process due to my limited time with this project. The very-end outcomes, as a suggestion made to the directors, should not be seen as the successful installation of the new system but, from Rogers' (1995) perspective, as the successful diffusion and acceptance of the system among the bank's staff because the resistance phenomenon may also occur even at the post-implementation stage (Wagner and Newell, 2007).

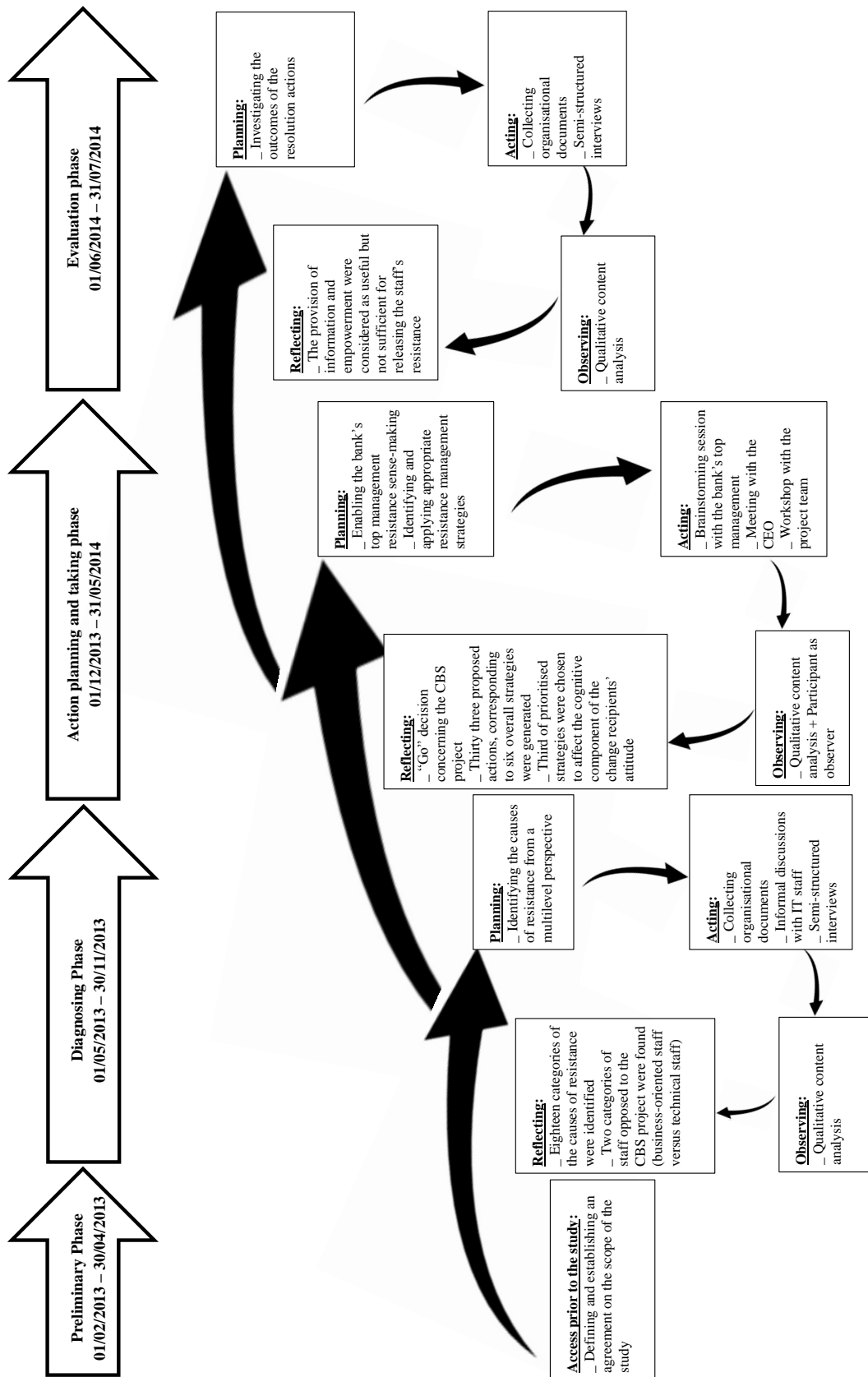
However, according to Eason (2005), the satisfactory outcomes should be seen from the practitioners' interpretation of the nature of both the interventions and the outcomes because what are to be regarded as facts will, to a large extent, be dependent on the context of the case. Anyway, the outcomes of a CPR should be

judged not only by the practical uses of the proposed solutions but also by its contributions to both theory and practice (Mathiassen, 2002). Hence, the discussions on the question of the outcomes of this collaborative research project as a whole (i.e., theoretical contributions and practical implications) will be the focus of the next chapter.

## **5.6. Chapter summary**

This chapter focused on the findings from the field work at the AlphaBank during the time period between May, 2013 and July, 2014. Figure 5.2 presents a global synthesis of this collaborative research. The activities which were designed and conducted aimed to develop a framework helping the members at the AlphaBank to understand and manage the primary causes of resistance toward the CBS project. In particular, after defining and establishing an agreement on the scope of the study, documents about the upgrading CBS project, informal discussions with IT staff and semi-structured interviews with twenty-three participants (i.e., five directors and eighteen associated operational staff) were collected and analysed to diagnose the primary causes of resistance (Research Question from 1.1 to 1.4). The findings were then used to enable and examine the participants' resistance sense-making by examining two different scenarios of the future state vision (i.e., "Maintaining the status quo by staying with the current CBS and abandoning the change project" or "Rebuilding commitment to the CBS change and putting the project forward"). Once the needs for resolution actions were reinforced among the bank's top management, the brainstorming session was conducted to figure out as many proposed actions as possible to amend the causes of resistance accordingly (Research Question 2.1 and 2.2). The following workshop was then conducted to create a participation of the entire project team members into the CBS change and help them to act as resistance aware during the project. Finally, the reviewing session was performed with two practitioners (i.e., IT Department Director and Marketing Director) responsible for improving project management in order to investigate the outcomes of the resolution actions (Research Question 2.3). Given the satisfactory outcomes as perceived from both parties (i.e., the practitioners and me), the main investigation of this research was decided to close.

**Figure 5.2: Research process and synthesis of findings**



(Presented by the author)



## CHAPTER 6: CONCLUSIONS AND RECOMENDATIONS

### 6.1. Summary of the findings

This study aims to develop a framework which will be of use to practitioners for understanding and managing resistance to IS change. Therefore, helping the practitioners to understand this phenomenon and develop the possible strategies for managing it became central to the process and focus of this study. In hindsight, it is not surprising that the consequences of introducing a new IS “are interpreted and understood in a variety of ways by users, triggering equally plentiful, varied, and complex user responses” (Beaudry and Pinsonneault, 2005: 494). Consequently, a puzzle generated from the users’ responses which are labelled as “resistance” requires a more orderly understanding. Hence, it was argued in the study that shifting the notion of resistance from a label to a multilevel issue would enhance our understandings. Indeed, comprehending resistance from a multilevel lens helped the AlphaBank’s managers move beyond a search for a simple explanation of this issue (e.g., the resistance was not simply caused by the misalignment between the project and the organisational short-term strategic plan but by various factors and their interaction). Particularly, eighteen categories of causes of resistance and their interactions emerged from the interviews during the diagnosing phase. These categories were supported by other sources of evidence (i.e., documentations and informal discussions with IT staff) as illustrated in Table 5.1. In brief, it is concluded that there is the interplay between the AlphaBank and its environment, which not only created the need for changing its current CBS but also later became a source of resistance to change. The bank’s external context, particularly the economic downturn, was found to be influential on the CBS upgrading project postponement because it forced the bank’s top management to reconsider the project’s feasibility as well as its urgency. The data also showed that the regulatory changes and the feasible alternative technological solution to the current system were other external variables which in turn affected the top management’s subsequent perceptions and decisions toward the CBS project.

Within the context of a rapid changing external environment, the internal context at the organisational level further explained why the resistance took place. The misalignment between the project and the organisational short-term strategic plan was identified as the result of the impact of the environmental turbulence.

Examination of the external environment by some top managers tended to favour the strategic decision aiming at cutting cost rather than investing on the CBS change during the economic downturn. Besides that, the implementation risk due to the project's complexity and size was another reason that made the unfit between the CBS change and the bank's purpose (e.g., cost suppression and enhanced return on investment) becoming larger. The shortage of experience staff for implementing the CBS change, coupled with the bank's budget constraint, lack of organisational supports (i.e., training, reward, communication) and lack of a suitable project leader with power and prestige, created other barriers to the implementation of the project.

Although the external constraints along with the misalignment between an IS change and the organisation's sub-systems were found as two areas where the resistance occurred, the findings shed more light on the causes of resistance by proceeding to investigate the phenomenon from the individual and group level. In line with previous research that functional and cultural differences within organisations tend to influence contrasting interpretations of an IS to be developed (e.g., Lapointe and Rivard, 2005; Meissonier and Houze, 2010), three antecedences of conflict of interest including the increase in workload, the redistribution of power, and the reallocation of resources brought by the CBS change were identified at the group level. Specifically, it was found that the underlying reasons for the IT department employees to resist the change were actually because of the reward issues (e.g., no specific reward policy). Meanwhile, the underlying reasons for the functional department employees to resist were because of their loss of power (e.g., loss of control and freedom over their tasks due to the decentralisation feature of the new system) and their parochial self-interest (e.g., negative effects of the loss of some existing modules on their department's performance).

In terms of the reasons why the bank's staff resisted the CBS change, it was found that their satisfaction with the current CBS, their greater perceived costs than benefits, their colleagues' unfavourable opinion toward the CBS change, their

tendency to avoid the losses, and their cognitive misperception due to lack of information were the sources of resistance at the individual level. Collectively, the above findings are in line with the open system theory (e.g., Scott, 2003; Jones and Brazzel, 2006) in the sense that the focus of an organisational change is neither on the individual nor on the group but on the entire organisation with the openness to its environment. Yet, the inconsistent finding of the interviews was that none of business-oriented staff expressed the view that the CBS change could lead to their underperformance (e.g., due to the loss of some existing modules) as found at the group level. The explanation for this inconsistency was the lack of information about the project among the business-oriented staff. Hence, whereas the business-oriented staff held optimistic views about the change (e.g., expecting that new technology would enhance their performance), they could quickly turn into the resisters if the inequity distribution of resources (e.g., loss of important applications) later becomes relevant (Lapointe and Rivard, 2005).

Despite the fact that the multilevel lens of resistance was unarguably a way to a better understand the complexity of the phenomenon; the impact of resistance could obviously lead to two scenarios: 1) The IS change was still favourable but there were problems with the organisation's current change management practice; 2) The IS change was unfavourable and the sources of resistance could be seen as a building block for the change actors to re-consider the change. During the action planning and taking phase, we found ourselves in a dilemma because a choice had to be made between polarities (e.g., "go" or "no go") in which each had high costs and/or risk as well as valued benefits. Nevertheless, such dilemma proved that our resistance sense-making session was valuable. The top management commitment toward the realisation of change processes was established, leading to the board's decision to resolve resistance situation and implement the CBS change in a modified way.

As a result from our collaborative problem-solving process, 33 proposed actions from 22 resistance items were developed, corresponding to 6 overall strategies. Given the difficult cash-flow and resources constraints at the AlphaBank and the importance of the cognitive component of the change recipients' attitudes, we decided to cover firstly third of the prioritised strategies focusing on the communication and participation strategies.

Given the importance of the project team on the success of the CBS change, the following workshop was then conducted to create a participation of the entire project team members into the CBS change and help them to act as resistance aware during the project. Within the workshop, the technique of personal self-awareness was taught to the team members. The lessons from this technique included: 1) The honest assessment of self-limits but also the understanding of the others' limits or feeling during a change initiative; 2) Seeing self from the perspective of others; 3) Exploring the others' feeling through self-empathy. Furthermore, the strategy sheet generated from the brainstorming was presented and explained to the team members as how it could be applied in their particular context.

Prior to the evaluation phase, I only took a role as backstage supporter but contacts were maintained with two directors who were responsible for improving project management via email. During that time, the practitioners were supported to solve any difficulty associated with the interpretation of the strategy sheet and decide the primary outcome indicator for our interventions. At the evaluation phase, although the initial outcomes were considered to be mixed, the participants agreed that the resistance management project showed much positive change. The high level of engagement of staff in the established forum indicated that our interventions had helped to build trust across the bank and moved its stakeholders from the denial stage into the awareness stage, in which the need for the CBS change was recognised. Moreover, the high level of engagement also illustrated a degree of comfort with conflicts or tensions embedded in the organisational change process (Luscher and Lewis, 2008).

In conclusion, if it is seen from a point of view of the success of our collaborative resistance management process, one can argue that our process is only partial because the resistance has not been completely managed. However, if it is seen from a point of view of the success of our developed framework for understanding and managing resistance, particularly the strategy sheet, it can be said that it is successful not only because the practitioners perceived it as useful for appreciating different areas causing resistance and possible strategies to deal with the resistance issues; but also because they have obtained the competence required to manage these issues by themselves and keep up with continuous development work based on our framework

with limited supports from the outsiders. The support for this argument is the fact that they have become more proactive in their change management process (e.g., they had successfully convinced the bank's top management for other actions in the negotiation and facilitation strategy beside the communication and participation strategy). Therefore, by taking a role as a "facilitator" rather than a "doer", the "how to" knowledge that we collaborative created is the success of this research.

## **6.2. Model for managing resistance at an IS pre-implementation stage**

The high rate of failure of IS change in organisations is in part due to the inadequacy of well-planned diagnoses of the causes of resistance to change (e.g., Dwivedi et al., 2012; Pearlson and Saunders, 2012). Furthermore, such high rate of failure is also due to the lack of prescriptive and practical models to investigate the causes of resistance from a multiple-level perspective (Lapointe and Rivard, 2005).

By taking a multilevel lens as a way to open the resistance black box in this research, the substantive categories resulting from the diagnosing phase (see Section 5.3.5 for discussions of new categories of issues not addressed in previous research) demonstrated how a multilevel lens of resistance helped shed new light on managerial challenges of an IS change. From those results, the "resistance-action" list was generated with 33 proposed actions from 22 resistance items as illustrated in Table 5.2. Although the "resistance-action" list is considered to be more useful than an "abstract" model (e.g., easy to use in assessing the detailed causes of resistance, easy to build the practical operational plans and easy to identify a range of possible relevant actions to resolve specific causes of resistance), such detailed "resistance-action" list may not be able to transfer to other contexts because of its context-dependency (e.g., the context of the AlphaBank) (see Section 6.6 below for discussions on this issue). Therefore, instead of keeping that detailed "resistance-action" list as the contribution to the resistance to IS change theory as what other researchers have done (e.g., Adams et al., 2004; Shang and Su, 2004), it is decided to build up a model that combines abstract categories of resistance items and abstract categories of actions (overall strategies). The best known of an abstract model, for example, is the IS portfolio model developed by McFarlan (1982) in which he linked three aggregate risk items involving an IS change (i.e., project structure, project size

and experience with technology) with four aggregate resolution actions (i.e., internal and external integration, formal planning and formal control). Another recent example is Luscher and Lewis's (2008) model for managing an organisational change in which they related three organisational change aspects (i.e., paradox of performing, belonging and organising) to three aggregate resolution actions (i.e., confrontation, acceptance and splitting).

Getting inspired by their approach, the proposed model is developed based on the strategy sheet generated during this collaborative research (see Table 5.3) and chosen strategies taken by the AlphaBank (see Section 5.5). In the model, I came to view the resistance issues in terms of its four levels of effects (i.e., external constraints, new IS misalignment, conflict of interest, and status quo bias) (see Section 4.4.2 for definitions), each with a feasible coping strategy (for the sake of the simplicity of the model) (i.e., timing, communication, negotiation, and participation). By illustrating and elaborating the causes of resistance resulting from the nature of the interplay between an organisation and its environment (Yoon and Kuchinke, 2005), the misalignment between a new IS and organisational elements (Hong and Kim, 2002; Dwivedi et al., 2012), conflict of interest generated due to the new IS system implementation (Lapointe and Rivard, 2005; Meissonier and Houze, 2010) and the change recipients' bias or preference to stay with the current situation (Kim and Kankanhalli, 2009; Kim, 2011), the proposed model demonstrates the importance of the change actors' understanding of the multilevel nature of resistance. Figure 6.1 shows the proposed relationships among each resistance area. Yet it must be noted that such relationships are further complex by their interplay in reality (see Table 5.1).

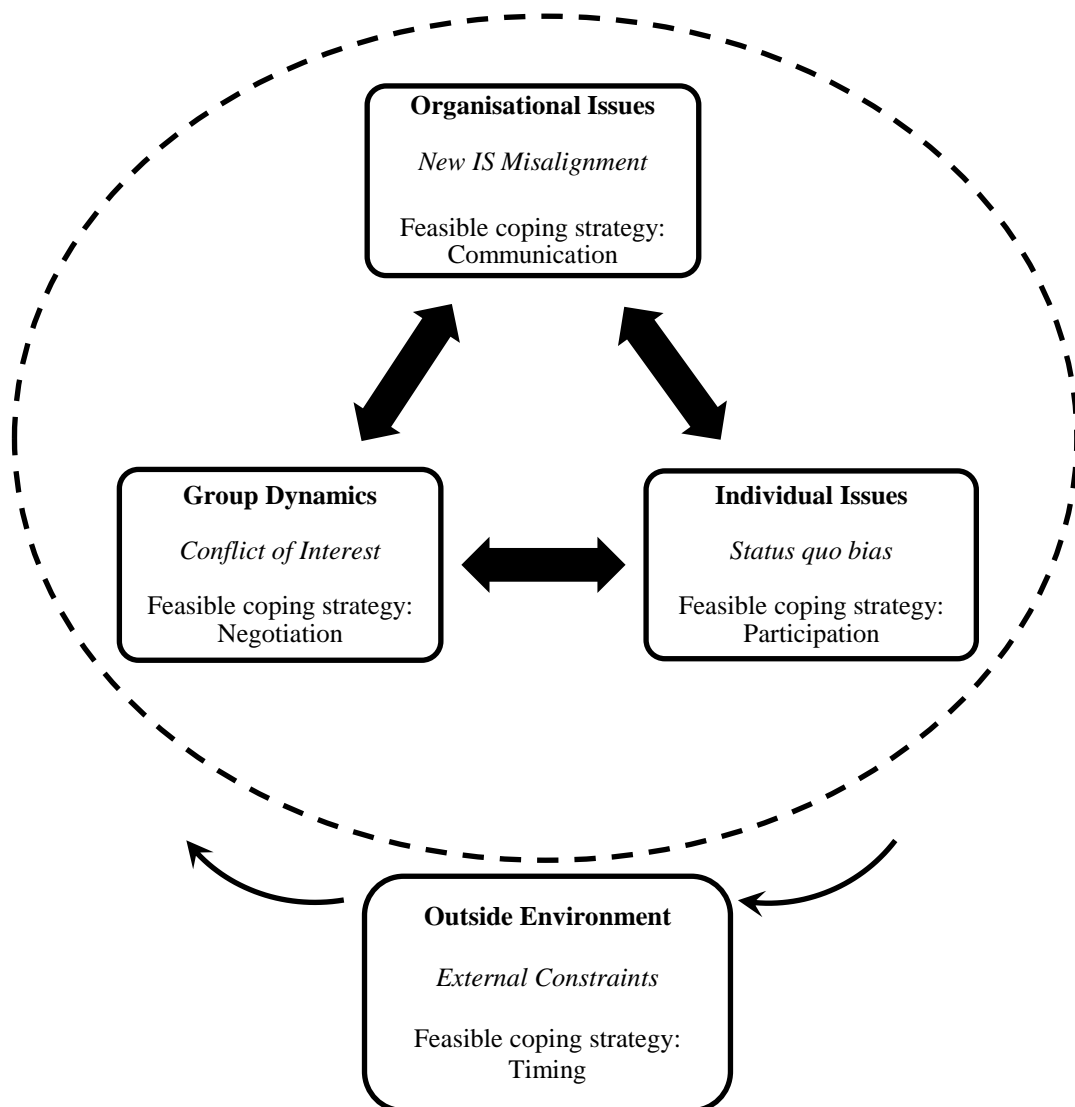
As shown in Figure 6.1 with the arrows pointing in both directions (except for the external constraints which have one-way effect), it is suggested more reciprocal interplay among each area leading to resistance. For instance, the misalignment between the IS change and the organisational reward structure may lead to the conflict of interest (e.g., increase in workload which is not appropriately compensated for) and, in turn, create the change recipients' bias or preference to stay with the current situation (e.g., high relative costs caused by the increase in workload for changing to the new system). Likewise, changes in the environment (e.g.,

economic downturn) may lead to the misalignment between the IS change and the organisational purpose (e.g., needs to focus the organisational resources rather than investing in the IS change). Such misalignment between the IS change and the organisational purpose, in turn, probably fuels conflict of interest among groups of change recipients (e.g., suspicion about the real purpose of the IS change effort such as the new system will imply the redistribution of power) and subsequently results on the change recipients' status quo bias (e.g., low relative benefits brought by the IS change).

The above interwoven patterns, in turn, signify the potential for feasible coping strategies to manage resistance. In particular, external constraints (e.g., changes in market conditions) are mainly due to the lagging time of the IS change project. Hence, the actors, for example, may consider the minimisation of time in strategic change to overcome today's rapid change business environment. However, when the speed of change is taken into account, it needs to be coherent with the organisational situations (e.g., resource dependence) and other resolution strategies (e.g., communication, participation, or negotiation). For example, it was found during the research that practicing the timing strategy (e.g., avoid focusing overly on customisations) would produce contradictory effects on the negotiation strategy (e.g., generating conflict of interest for the affected group due to their losses of operational modules). Moreover, practicing both the timing strategy and participation strategy put the AlphaBank's top management in a dilemma (e.g., change efforts would become either delayed or less participative). Therefore, the actors are suggested to balance their chosen strategies at hand. Likewise, new IS misalignment are mainly related to the change recipients' understanding. Communication strategy (e.g., communicate the need for and logic of change) may enable reframing by sharing detailed information about the IS change project. In turn, communication that exhibits characteristics like a problem-solving approach (using the input of the change recipients as an assessment of the way the change is affecting the organisation) may create the opportunity for the change recipients to participate in the organisational decision making process. As a result, participation strategy (e.g., increase empowerment and/or stakeholders' involvement in the change) may help to remove the change recipients' status quo bias by enhancing their feeling of change ownership. Through communication and participation strategies, the actors are likely

to become more adept at understanding the sources of conflict of interest and become more able to negotiate with the affected group to break through the obstacles of conflict. Nevertheless, ongoing resistance management may require all of the above strategies as well as others (e.g., facilitation or manipulation strategy) (see Table 5.3) because coping with one resistance area may require coping with others.

**Figure 6.1: Multilevel model for managing resistance at an IS pre-implementation phase**





### **6.3. Discussions on the contributions of the study**

The main area of contribution involves a multilevel model for understanding and managing resistance at an IS pre-implementation phase. Although the literature on resistance to IS change (see Section 2.3.3 and 2.3.4) has identified a number of causes of resistance and possible resolution actions (e.g., Lapointe and Rivard, 2005; Shang and Su, 2004), I started this study with the doubt that the IS resistance phenomenon has not been appropriately addressed because previous research only allowed for two levels of analysis of resistance (i.e., individuals and groups/units) and neglected to focus on the IS pre-implementation phase. Addressing these gaps in knowledge, I investigated why and how resistance to an IS change took place at the pre-implementation phase from a multiple-level perspective at the AlphaBank. By proposing and applying different conceptual lenses (see Section 2.4), this theoretical approach opened opportunities for us to convert the problematic situation (that initially made little or even no sense for the practitioners) into the problems from that we could develop our workable strategies. Although the proposed model (see Figure 6.1) is based on prior models, its originality can be seen as the first model to depict the resistance phenomenon from a multilevel perspective. Moreover, the model also provides several insights into the IS resistance management process. One key insight is that there is no sole determinant but mixed determinants of resistance ranging from external constraints (e.g., political/legal, economic, technological) to individual's status quo bias (e.g., loss aversion) and that there are interconnections among these mixed determinants. In prior research, Joshi's (2005) equity implementation model posits that individuals attempt to evaluate most changes and changes that are considered unfavourable are likely to be resisted. Markus's (1983) political variant of interaction theory further indicates that individuals will resist the system if they believe it might cause them to lose power or resources. At the first glance, the proposed model appears to recognise the explanatory potential of their contentions through the "status quo bias" and "conflict of interest" constructs. However, it is argued that understanding of why resistance takes place requires us to consider a wider set of its determinants and links between them. During this research, for example, although technological-oriented staff experienced both unfavourable outcomes brought by the CBS project and conflict of interest due to their increase in workload as compared to business-oriented staff, the root for their resistance was

actually stemmed from the misalignment or unfit between the AlphaBank's reward system and the CBS project. By shifting the focus neither on individuals nor groups but on the organisation as a whole with its openness to the environment, the proposed model helps to surface the roots of resistance. Moreover, by emphasising the existence of, and interactions among, mixed determinants of resistance, the model offers a richer portrait of the resistance phenomenon.

Another key insight regarding the solution strategies in the proposed model is that managing resistance at an IS pre-implementation stage requires distinctive solutions. Managing resistance at this stage does not merely involve reducing resistance behaviour but also influencing the change recipients' attitude, their new way of thinking about the IS change and encouraging an openness for learning and development. During this research, it has been stressed that lack of information about the project and/or the proposed system is an important characteristic of the IS pre-implementation stage, especially when the new system has not been installed yet. Therefore, when the resistance to IS change is mainly formed by the individuals' perception rather than their experience of using the proposed system, it is then best to affect the cognitive component of their attitude. This important point is, in fact, emphasised in both Section 4.4.1 (e.g., "Think-Feel-Do" model) and 5.4.1 (e.g., choosing to firstly apply the communication and participation strategies). This insight is supported by Venkatesh and Bala's (2008) empirical research in which they suggested that pre-implementation interventions should be made in the areas of design characteristics, user participation, management support, and incentive alignment. Meanwhile, post-implementation interventions may embrace training, organisational support, and peer support. As Meissonier and Houze (2010: 541) noted, "a focus on pre-implementation phase is thus important, as IS managers need to anticipate potential conflicts and users' resistance that can lead to project failure".

The last key insight is that no single resolution strategy is good enough. Given the multilevel and interaction nature of resistance, it is possible to imagine a situation in which the change actors aim to communicate the need for and logic of the IS change to the change recipients (using the communication strategy in the model) but their resistance toward the new system does not disappear because of, as occurred in this study (see Section 5.5), the increase in workload and the inappropriate compensation.

In such situations, there is a need to develop and apply other intervention strategies (e.g., negotiation) rather than simply focus on a single one. As the proposed model demonstrated, understanding and managing resistance requires the change actors to balance their chosen strategies and be open-minded to develop accurate and effective interventions. Although this insight has the disadvantage of providing no universal advice, it is believed that this is equally useful as others for appreciating resistance and developing varied and creative strategies to deal with resistance when it arises.

Nonetheless, although it has been emphasised during the study that “managing resistance” does not imply removing or eliminating this phenomenon but constructing a more understanding of the underlying meanings of resistance which could lead to reject the CBS project (see Section 4.4.1 and 5.4.1 for “resistance sense-making”), the result of the resistance management process in this study is similar to most previous research (e.g., Bhattacharjee and Hikmet, 2007; Kim and Kankanhalli, 2009; Kwahk and Kim, 2008) in the sense that its final purpose is still to enhance the users’ adoption of the technological system. In this case, the contributions of the study should also be seen from the technological adoption literature. Based on the discussions in Section 2.2.4.1, whereas this study confirms Rogers’ (1995) claim about the advantages of a technological innovation (e.g., an innovation should be diffused and adopted), the proposed model can be used to address the main critique that most previous adoption research seemed to ally the interests of different stakeholders or technology proponents (Jeyaraj et al., 2006) and neglected to focus on the dialectical perspective (e.g., the political process and group dynamics) during the technological innovation decision making process (Alsulami et al., 2013).

It is need not to say that this study is also claimed to make an original contribution in the innovation adoption literature. In contrast, because not much effort has been paid on the literature review of previous innovation adoption studies; it can only be said that, at least from the previous adoption studies examined in Section 2.2.4 and from the literature review conducted by previous researchers (Arpaci et al., 2012; Tscherning and Damsgaard, 2008), the proposed model adds value to the existing adoption literature by concentrating on the mandatory setting (in which institutional

power, enforcement, and user resistance exist) and targeting the multilevel level of adoption.

#### **6.4. Implications for practice**

Information system is extensively believed to be important for an organisation to gain its efficiency (e.g., cost minimisation and performance enhancement) in a constantly changing competitive environment (Pugh, 2007). Therefore, the multilevel model can help the IS change managers to better understand and effectively manage the sources of resistance. However, realising a full potential resistance issues for securing the success of an IS change requires the IS change managers' attentions on a number of actions highlighted below.

First, building commitment to change should go along with maintaining it. Building commitment is a necessary part of any change. For instance, previous researchers (e.g., Kotter, 2008; Luecke, 2003) critically indicated this point in their work (e.g., establishing a sense of urgency or mobilise energy and commitment through joint identification of business problems and solutions). In this collaborative research, the senior managers built a commitment to the CBS upgrading project because they believed that inflexibility and high operational and maintenance costs of the current CBS made the bank less competitive. However, significant changes in the external environment (e.g., economic downturn, middleware solution) and internal situation (e.g., lack of securing funds) had lessened their commitment or even reduced the urgency for the CBS change. Therefore, for a large scale and long running IS project, it is suggested that establishing commitment to change is necessary but maintaining it is much more important. This can start from the top managers' reassessment of the changing situations. If the IS change is continuously perceived as necessary, their commitment needs to be rebuilt or reinforced with a probably new set of reasons for change (e.g., the limited capacity of the current CBS and the actual profitability of the CBS change as in the present study). Moreover, the effort for gaining and sustaining commitment should be also targeted at various stakeholders (beside the top managers) throughout the life cycle of the IS project to increase the likelihood of IS project success.

In addition, communication should be seen as a two-way process. Communication unarguably is the most effective strategy which is often used to obtain acceptance of an IS change (e.g., Abdolvand et al., 2008; Nanji et al., 2009; Shang and Su, 2004). Yet, because many organisations nowadays still embrace the hierarchical organisational structure which is based on the concepts of division of labour, specialisation, spans of control and unity of command; the importance of broad communication is often neglected (Pearlson and Saunders, 2012). Moreover, communication is sometimes performed in a passive form or as a simple mechanism to inform the organisation's stakeholders about an IS change (Pugh, 2007). Based on the findings during the brainstorming session in this study, it is thus suggested that communication should be seen as a two-way process to leverage the organisational learning by making use of feedback on communication. Moreover, in order to communicate effectively, the IS change managers can pay attention on the followings. First, frequent communications should be done during the IS change process instead of only at the IS post-implementation stage. Second, they should focus on detailed information about the project and its effect at the personal level rather than provide the stakeholders with general information. Third, they should listen to others by giving them the opportunity to participate in the decision making process by initiating discussions. Finally, they should stay actively involved in the change recipients' problems. In other words, they must decide other appropriate resolution actions (e.g., changing the work schedule to be more appropriate) for those who have problems not relating to an information need.

Another implication that arose from this study is that participation does not merely involve widespread decentralisation. It is obvious that any large scale IS project should be open and inclusive so that the information-gathering from the tendency will help to identify and address the change recipients' issues early (Pugh, 2007). Nonetheless, although the findings during the brainstorming session also supported the importance of various stakeholders' participation to manage their resistance, it must be noted that some top managers at the AlphaBank believed that the involvement of different stakeholders should be avoided because it would actually slow down the CBS change and create confusion in their decision making process. Such argument is worth for the IS change managers' attention. As illustrated in Table 5.3, there is always a trade-off for each resolution option and the participation

strategy is not an exception here. Therefore, the degree of employees' involvement should depend on the IS change managers' assessment of the new system (e.g., its complexity) and other organisational contingency factors (e.g., the urgency of IS change). Otherwise, simply practicing widespread decentralisation without considerations will lead to inefficiency and unnecessary cost and effort (Greiner and Cummings, 2004).

### **6.5. Implications for methodology**

I hope that this study offers an exemplar for the study of resistance to IS change at the pre-implementation and the practice of CPR. However, the collaborative nature of CPR during this study provided me with both opportunities and challenges. On one hand, it allowed extraordinary access to the practitioners' insight knowledge at the AlphaBank through our co-operation process to solve the resistance issues associated with the CBS project. Brainstorming session enabled us to surface and challenge our existing frames on the roots of resistance and the bank's future vision toward the CBS project before working together to figure out appropriate proposed actions. Reviewing session added to our resistance management efforts and expanded insights by engaging directors in scrutinising the intervention data.

However, as I experienced during the brainstorming session, I needed to be aware of not making the research findings too one-sided or even distort due to my previous experience and personal perspective. At the same time, I also needed to help the practitioners to enact the change by engaging with them and challenging them to think from a new perspective. This requirement for a degree of flexibility actually provoked anxiety for me (and possibly also for even a well-trained researcher). Yet through our efforts to construct shared understandings about the issues relating to resistance, the outcomes were rendered more accurate and valuable.

### **6.6. Research limitations and recommendations**

The limitations of this study mainly involve the collaborative nature of CPR and its research design. Similar to case study, CPR is context-bound and addresses real life problems (Mathiassen et al., 2002). By coping with context-bound information, it is

necessary to firstly discuss its context bound impacts on generalisability. In other words, although the AlphaBank was considered as an excellent case for studying resistance at the IS pre-implementation stage due to its current project on the CBS transformation, its exceptional setting requires the need for caution.

Like many other organisations in South East Asia, the AlphaBank was confronting disruptive environmental changes, responding with its strategic restructuring. Moreover, the bank's top managers might embrace an Asian management style which, according to Cheng et al. (2004), displays authority, control and image building. These leadership characteristics not only caused the problem of red tape but also led us to decide to focus on building trust and collaboration rather than the speed of the CBS change. Therefore, although I hope that the findings of the present study may be appropriate to similar settings; further research must determine the extent to which such findings can be extended to include other settings. The recommended way for doing this is to enable comparisons among varied organisational settings (e.g., different industries or different organisational sizes) or between Asian and Western organisations.

Second, the study limitation is also related to alternative theoretical explanations of the sources of resistance as well as the proposed strategies in the study. Particularly, variables associated with individual differences were not taken into account because it was argued that they could not be changed within the scope of this research project. However, previous research (e.g., Davis and Songer, 2009; Sanford and Oh, 2010) indicated that several individual attributes (e.g., tenure, profession or technology experience) could affect the likelihood of individual resistance to an IS change. Moreover, such individual attributes might also affect the individual's point of view on his/her chosen problem-solving styles or the appropriate solutions that should be made (Jablokow et al., 2010). Considering this issue in the present study, it would be probably the case that the bank's staff who had been in the organisation for many years would exhibit stronger status quo bias because they might be more embedded in the old way of doing their tasks as compared to new members. Meanwhile, senior managers with less technology experience might tend to choose a safer way for managing this large-scale IS change as compared to the experienced ones (e.g., bypass versus confrontation strategy; see for more details Boar, 2002).

Given the preceding discussion, further research could investigate the effect of individual differences on both the sources of resistance and the feasible strategies as in the proposed model. By determining the contribution of individual differences, this may add insight into areas of concern such as providing useful advice about where to focus actions for improvement.

The third limitation issue stems from the unclear long-term impact of our interventions. This study was preceded as we (i.e., the CEO, IT Department Director and I) believed that the CBS change was critical for the bank's future long-run goals and that managing resistance to this IS change was the bank's main consideration. Previous research supports this point broadly by highlighting the negative effects of employee resistance (e.g., Beaudry and Pinsonneault 2005; Dwivedi et al., 2012). Moreover, during this research, the bank's top management reported back on the paybacks of their decision to set aside the speed of the change and focus on employees' involvement. For example, at the reviewing session, both participants stressed that widening employees' involvement helped to reduce pressure from their employees' resistance and create a learning organisation (see Section 5.5). Yet, whether such positive outcomes from the bank's resistance management process continue is questionable. Specifically, as illustrated in our strategy sheet (see Table 5.3), the key drawback of widening employees' involvement is that it will be time-consuming and slow down the change process. Similar to what Greiner and Cummings (2004) have argued, an attempt for unleashing individual dynamism often comes at the expense of the organisation's values of efficiency. Consequently, if the pressure for changing the CBS increases (e.g., due to the limited capacity of the current CBS), would the bank's top management continue to slower the implementation process to deal with any resistance? Such question requires for more longitudinal research. For example, further research could follow the entire process of an IS change to examine longer-term impacts of the interventions.

Another limitation involves our decision on the exit criteria. This collaborative research was initiated to support the current project at the AlphaBank in a real-time setting. Due to the complexity and high risk related to the project as well as the requirement for a long period of participation in the problem-solving activities, this research was decided to focus on the project pre-implementation phase and I took a



role as a “facilitator” rather than an “implementer” of actions. Even though the exiting point of this CPR was argued to be plausible for this particular case (see Sections 3.5 and 4.5 for discussions), it must be acknowledged that the impact of this research on managing resistance at the AlphaBank was limited by this exiting point. In particular, the research efforts could be seen to solely support managerial sense-making of the problematic situations, collaboratively develop workable strategies, and build related theory with incomplete evaluation of the proposed strategies. As negotiated with the practitioners, I assisted them to construct a necessary foundation for their future actions and only approved strategies were implemented. On one hand, by not seeking to force the practitioners to pursue my research interest (e.g., test the impact of every planned strategies), it could be claimed that the research process was conducted along with the ethical bases suggested by Brydon-Miller and Greenwood (2006). On another hand, by only evaluating the impact of communication and participation strategies, other proposed strategies have not been tested in this research. Given this limitation, further research may attempt to empirically validate the effectiveness of our proposed strategies in each resistance area.

Closely related to our decision on the exit criteria, the last limitation involves the scope of the study which mainly focused on the pre-implementation phase instead of a whole process of managing resistance to an IS change. As discussed previously, resistance is a relative phenomenon and managing this phenomenon should be viewed as a multi-stage process (see Section 3.5). During the study, for instance, it was argued that business-oriented staff held unrealistic pre-implementation expectations of the new system due to their lack of information about the project and they, therefore, could quickly turn into the resisters if the inequity distribution of resources (e.g., loss of important applications) later becomes relevant. Moreover, whereas resistance at the pre-implementation phase is mainly due to the individuals’ perception, this phenomenon at the post-implementation phase is likely to be formed by the individuals’ experience of using the proposed system. These two examples illustrate the point that there is inconsistency in both the sources of resistance and the appropriate solution strategies across different implementation phases of an IS change. Consequently, although it can be argued that managing resistance at the pre-implementation phase can enable the change managers to address likely sources of resistance and to take corrective actions at an early stage, care must be taken when

applying our research findings, or the proposed model in particular, to other phases of an IS change. In this regard, further research would be valuable to gain an understanding as to whether the components within the proposed model exist across different phases in an IS change (e.g., during and post implementation). This, as I hope, will be another avenue for further research.

## **6.7. Concluding remarks**

Technological innovation has rapidly changed every aspect of our lives and the way of doing business during the last decade. An increasing number of organisations are focusing on changing their current information systems as a way to reduce their costs and enhance their performance. Yet a system change is frequently a challenge for an organisation due to its members' resistance. This research is a collaborative journey to understand and manage the issues relating to resistance at the AlphaBank. As our reflective learning during the journey, attentions are called for the multilevel nature of resistance and the double meaning of managing it. Whereas the multilevel lens helped us to move beyond a search for a simple explanation of the phenomenon, the double meaning of managing it enabled us to question the benefits of the change and challenge our existing frames on the roots of resistance. When I arrived, the top management felt paralysed by contradictory opinions on the CBS project. Upon my leaving, they expressed a new comfort in their situation. Nonetheless, the resistance at the end of my journey did not disappear. Indeed, the practitioners at the AlphaBank were convinced that acting as resistance aware and keeping an open-minded toward resolution solutions during the project is a means for reaching the very end of the road.

## References:

- Abdolvand, N., Albadvi, A. & Ferdowsi, Z. (2008) "Assessing readiness for business process reengineering", *Business Process Management Journal*, 14(4), pp. 497-511.
- Adams, B., Berner, E. S. & Wyatt, J. R. (2004) "Applying strategies to overcome user resistance in a group of clinical managers to a business software application: A case study", *Journal of Organisational & End User Computing*, 16(4), pp. 55-64.
- Adams, J, Hayes, J & Hopson, B (1976) *Transition: Understanding and managing personal change*, Martin Robertson: London.
- Adams, J. S. (1963) "Towards an understanding of inequity", *The Journal of Abnormal and Social Psychology*, 67(5), pp. 422-36.
- Adria, M. & Rose, T. (2004) "Technology, pre-processing, and resistance: A comparative case study of intensive classroom teaching", *Journal of Education for Business*, 80(1), pp. 53-60.
- Ajzen, I. (1985) "From intentions to actions: A theory of planned behaviour", in Kuhi, J. & Beckmann, J. (Eds.) *Action control: From cognition to behaviour*, Springer: Heidelberg, pp. 11-39.
- Ajzen, I. (1991) "The theory of planned behaviour", *Organizational Behaviour and Human Decision Processes*, 50(2), pp. 179-211.
- Ajzen, I. (2002) "Residual effects of past on later behaviour: Habituation and reasoned action perspectives", *Personality and Social Psychology Review*, 6(2), pp. 107-22.
- Aladwani, A. M. (2001) "Change management strategies for successful ERP implementation", *Business Process Management Journal*, 7(3), pp. 266-75.
- Allison, G. T. (1971) *Essence of decision: Explaining the Cuban missile crisis*, Little Brown: Boston.
- Alshamaila, Y., Papagiannidis, S. & Li, F. (2013) "Cloud computing adoption by SMEs in the north east of England: A multi-perspective framework", *Journal of Enterprise Information Management*, 26(3), pp. 250-75.

- Alsulami, M., Rahim, M. & Scheepers, H. (2013) "Development of a Model to Understand How Consultants Manage Conflicts during ERP Post-implementation Change Process: A Dialectic Perspective", in *24<sup>th</sup> Australasian Conference on Information Systems*, Melbourne, Australia, pp. 1-11.
- Alvarez-Suescun, E. (2010) "Combining transaction cost and resource-based insights to explain IT implementation outsourcing", *Information Systems Frontiers*, 12(5), pp. 631-45.
- Amagoh, F. (2008) "Perspectives on organisational change: Systems and complexity theories", *The Innovation Journal: The Public Sector Innovation Journal*, 13(3), pp. 1-14.
- Ancona, D. (2012) "Sense-making: Framing and acting in the unknown", in Snook, S., Nohria, N. & Khurana, R. (Eds.) *The Handbook for Teaching Leadership: Knowing, Doing, and Being*, Sage Publications: Thousand Oaks, California, pp. 3-21.
- Argyris, C. & Schon, D. (1978) *Organisational Learning: A Theory of Action Perspective*, Addison-Wesley: Reading, MA.
- Argyris, C. (1998) "Empowerment: The emperor's new clothes", *Harvard Business Review*, May-June, pp. 98-105.
- Argyris, C. (2003) "Actionable knowledge", in Tsoukas, T. & Knudsen, C. (Eds.) *The Oxford Handbook of Organization Theory*, Oxford University Press: Oxford, pp. 423-52.
- Armenakis, A. A. & Harris, S. G. (2009) "Reflections: Our journey in organizational change research and practice", *Journal of Change Management*, 9(2), pp. 127-42.
- Arpaci, I., Yardimci, Y. C., Ozkan, S. & Turetken, O. (2012) "Organizational adoption of information technologies: A literature review", *International Journal of eBusiness and eGovernment Studies*, 4(2), pp. 37-50.
- Atkins, C. & Sampson, J. (2002) "Critical appraisal guidelines for single case study research", in *ECIS 2002 Proceedings*, Gdansk, Poland, pp. 100-9.
- Augsdorfer, P., Bessant, J., Moslein, K., Von Stamm, B. & Piller, F. (2013) *Discontinuous Innovation: Learning to Manage the Unexpected*, Imperial College Press: London.

- Avison, D. E., Dwivedi, Y. K., Fitzgerald, G. & Powell, P. (2008) "The beginnings of a new era: Time to reflect on 17 years of the ISJ", *Information Systems Journal*, 18(1), pp. 5-21.
- Avison, D., Baskerville, R. & Myers, M. D. (2001) "Controlling action research projects", *Information Technology and People*, 14 (1), pp. 28– 45.
- Balogun, J. & Hailey, V. H. (2008) *Exploring strategic change*, 3<sup>rd</sup> edn., Pearson Education: London.
- Bamford, D. R. & Forrester, P. L. (2003) "Managing planned and emergent change within an operations management environment", *International Journal of Operations & Production Management*, 23(5), pp. 546-64.
- Barnes, D. (2001) "Research methods for the empirical investigation of the process of formation of operations strategy", *International Journal of Operations & Production Management*, 21(8), pp. 1076-95.
- Barney, J. B. & Mackey, T. B. (2005) "Testing resource-based theory", *Research Methodology in Strategy and Management*, 2(1), pp.1-13.
- Baskerville, R. & Myers, M. D. (2004) "Special issue on action research in information systems: Making IS research relevant to practice", *MIS Quarterly*, 28(3), pp. 329-35.
- Baskerville, R. L. & Wood-Harper, A. T. (1996) "A critical perspective on action research as a method for information systems research", *Journal of information Technology*, 11(3), pp. 235-46.
- Battilana, J. & Casciaro, T. (2012) "Change agents, networks, and institutions: A contingency theory of organizational change", *Academy of Management Journal*, 55(2), pp. 381-98.
- BBC News (2013) "It is difficult for the real estate market in Vietnam to recover" [Online]. Available at: [http://www.bbc.co.uk/vietnamese/business/2012/12/121231\\_vietnam\\_real\\_estate\\_s\\_2013.shtm](http://www.bbc.co.uk/vietnamese/business/2012/12/121231_vietnam_real_estate_s_2013.shtm) [Assessed on 19<sup>th</sup> Oct 2013].
- Beaudry, A. & Pinsonneault, A. (2005) "Understanding user responses to information technology: A coping model of user adaptation", *MIS Quarterly*, 29(3), pp. 493-524.
- Becker, J. & Niehaves, B. (2007) "Epistemological perspectives on IS research: A framework for analysing and systematising epistemological assumptions", *Information Systems Journal*, 17(2), pp. 197-214.

- Beerel, A. (2009) *Leadership and change management*, SAGE Publications: Thousand Oaks, California.
- Bell, J. (2005) *Doing your research project: A guide for first-time researchers in education, health and social science*, 4<sup>th</sup> edn., Open University Press: Maidenhead.
- Benamati, J. & Lederer, A. L. (2010) “Managing the impact of rapid IT change”, *Information Resources Management Journal*, 23(1), pp. 1-16.
- Benbasat, I., Goldstein, D. K. & Mead, M. (1987) “The case research strategy in studies of information systems”, *MIS Quarterly*, 11(3), pp. 369-86.
- Benjamin, L. (2005) “Potential pitfalls in packaged software adoption”, *Communications of the ACM*, 48(5), pp. 119-21.
- Bergman, M., King, J. L. & Lyytinen, K. (2002) “Large-scale requirements analysis revisited: The need for understanding the political ecology of requirements engineering”, *Requirements Engineering*, 7(3), pp. 152-71.
- Berkhout, F., Hertin, J. & Gann, D. M. (2006) “Learning to adapt: Organisational adaptation to climate change impacts”, *Climatic Change*, 78(1), pp.135-56.
- Bessant, J. (2005) “Enabling continuous and discontinuous innovation: Learning from private sector”, *Public Money and Management*, 25(1), pp. 35-42.
- Bhattacharjee, A. & Hikmet, N. (2007) “Physicians' resistance toward healthcare information technology: A theoretical model and empirical test”, *European Journal of Information Systems*, 16(6) pp. 725-37.
- BIS – Bank for International Settlements (2014) “International regulatory framework for banks” [Online]. Available at: <http://www.bis.org/bcbs/basel3.htm> [Accessed on 25<sup>th</sup> Jan 2014].
- Bjerknes, G. & Bratteteig, T. (1995) “User participation and democracy: A discussion of Scandinavian research on system development”, *Scandinavian Journal of information systems*, 7(1), pp. 73-98.
- Blaikie, N. (2007) *Approaches to social enquiry*, 2<sup>nd</sup> edn., Biddles Limited: Norfolk.
- Blichfeldt, B. S. & Andersen, J. R. (2006) “Creating wider audience for action research: Learning from case study research”, *Journal of Research Practice*, 2(1), pp. 1-12.
- Blumberg, B., Cooper, D. R. & Schindler, P. S. (2005) *Business research methods*, McGraw-Hill: Maidenhead, UK.

- Boar, B. H. (2002) *The art of strategic planning for information technology*, 2<sup>nd</sup> edn., John Wiley & Sons: New York.
- Bonebright, D. A. (2010) “40 years of storming: A historical review of Tuckman’s model of small group development”, *Human Resource Development International*, 13(1), pp. 111-20.
- Brydon-Miller, M. & Greenwood, D. (2006) “A re-examination of the relationship between action research and human subjects review processes”, *Action Research*, 4(1), pp. 117-28.
- Bryman, A. & Bell, E. (2007) *Business research methods*, 2<sup>nd</sup> edn., Oxford University Press: New York.
- Buchanan, D. A. & Huczynski, A. (2004) *Organizational behaviour: An introductory text*, Prentice Hall: Harlow.
- Bunderson, J. S. & Sutcliffe, K. M (2003) “Management team learning orientation and business unit performance”, *Journal of Applied Psychology*, 88(3), pp.552–60.
- Burchell, J. (2011) “Anticipating and managing resistance in organisational information technology (IT) change initiatives”, *International Journal of the Academic Business World*, 5(1), pp. 19-28.
- Burke, W. W. (1992) *Organization development: A process of learning and changing*, 2<sup>nd</sup> edn., Addison-Wesley: Reading, MA.
- Burke, W. W. (2013) *Organization change: Theory and practice*, 4<sup>th</sup> edn., Sage Publications: London.
- Burke, W. W., Lake, D. G. & Paine, J. W. (2009) *Organisation change: A comprehensive reader*, John Wiley & Sons Inc.: San Francisco.
- Burke, W. W. & Litwin, G. H. (1992) “Causal model of organizational performance and change”, *Journal of Management*, 18 (3), pp. 523-45.
- Burnes, B. (2009) *Managing change*, 5<sup>th</sup> edn., Prentice Hall: London.
- Burnes, B., & By, R. T. (2012) “Leadership and change: The case for greater ethical clarity”, *Journal of Business Ethics*, 108(2), pp. 239-52.
- Burns, T. & Stalker, G. M. (1961) *The Management of Innovation*, Tavistock: London.
- Burt, G. (2007) “Why are we surprised at surprises? Integrating disruption theory and system analysis with the scenario methodology to help identify disruptions

- and discontinuities”, *Technological Forecasting and Social Change*, 74(6), pp.731-49.
- By, T. R. (2005) “Organisational change management: A critical review”, *Journal of Change Management*, 5(4), pp. 369-80.
- Byrnes, J. (2005) “The essence of leadership”, *Harvard Business School Working Knowledge*, September, pp. 1-3.
- Cagle, R. B. (2003) *Blueprint for project recovery: A project management guide: The complete process for getting derailed projects back on track*, AMACOM, Division of American Management Association: New York.
- Caldwell, D. F., Chatman, J., O'Reilly III, C. A., Ormiston, M. & Lapiz, M. (2008) “Implementing strategic change in a health care system: The importance of leadership and change readiness”, *Healthcare Management Review*, 33(2), pp. 124-33.
- Cameron, E. & Green, M. (2012) *Making sense of change management: A complete guide to the models, tools and techniques of organisational change*, 3<sup>rd</sup> edn., Kogan Page Limited: London.
- Cardno, C., & Piggot-Irvine, E. (1996) “Incorporating action research in school senior management training”, *International Journal of Educational Management*, 10(5), pp. 19-24.
- Carnall, C. (2007) *Managing change in organisations*, 5<sup>th</sup> edn., Pearson Education: London.
- Cassell, C. & Symon, G. (2004) *Essential guide to qualitative methods in organisational research*, Sage Publications: London.
- Cassidy, K. (2007) “Tuckman revisited: Proposing a new model of group development for practitioners”, *Journal of Experiential Education*, 29(3), pp. 413–7.
- Cavaye, A. L. M. (2008) “Case study research: A multi-faceted research approach for IS”, *Information System Journal*, 6(3), pp. 227-42.
- Cenfetelli, R. T. (2004) “Inhibitors and enablers as dual factor concepts in technology usage”, *Journal of the Association for Information Systems*, 5(11), pp. 472-92.
- Chan, Y. E. & Reich, B. H. (2007) “IT alignment: what we have learned?”, *Journal of Information Technology*, 22(1), pp. 297-315.



- Checkland, P. & Scholes, J. (1990) *Soft Systems Methodology in Action*, John Wiley: Chichester.
- Chein, I., Cook, S. W. & Harding, J. (1948) "The field of action research", *American Psychologist*, 3(1), pp. 43-50.
- Chen, R. S., Sun, C. M., Helms, M. M. & Jih, W. J. (2008) "Role negotiation and interaction: An exploratory case study of the impact of management consultants on ERP system implementation in SMEs in Taiwan", *Information Systems Management*, 25(2), pp. 159-73.
- Cheng, P. S., Chou, L. F., Wu, T. Y., Huang, M. P. & Farh, J. L. (2004) "Paternalistic leadership and subordinate responses: Establishing a leadership model in Chinese organisations", *Asian Journal of Social Psychology*, 7(1), pp. 89-117.
- Child, J. (1972) "Organizational structure, environment and performance: the role of strategic choice", *Sociology*, 6(1), pp. 1-22.
- Clegg, S. R., Cuhna, J. V. & Cuhna, M. P. (2002) "Management paradoxes: A relational view", *Human Relations*, 55(5), pp. 483-503.
- Coghlan, D. & Brannick, T. (2005) *Doing action research in your own organisation*, 2<sup>nd</sup> edn., Sage Publications: London.
- Cohen, A. R., Fink, S. L., Gadon, H. & Willits, R. D. (1995) *Effective behaviour in organisations: Cases, concepts, and student experience*, 6<sup>th</sup> edn., Irwin McGraw-Hill: New York.
- Collins, D. (2005) *Organisational change: sociological perspectives*, Routledge: London.
- Conway, E., & Monks, K. (2011) "Change from below: The role of middle managers in mediating paradoxical change", *Human Resource Management Journal*, 21(2), pp. 190-203.
- Cooper, E. (2005) "What do we know about out-of-school youths? How participatory action research can work for young refugees in camps", *Compare*, 35(4), pp. 463-77.
- Coughlan, P. & Coghlan, D. (2002) "Action research for operations management", *International Journal of Operations & Production Management*, 22(2), pp. 220-40.

- Creswell, J. W. (2008) *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*, 3<sup>rd</sup> edn., Pearson/Merrill Prentice Hall: Upper Saddle River, NJ.
- Cronshaw, S. F. & McCulloch, A. N. A. (2008) "Reinstating the Lewinian vision: From force field analysis to organisational field assessment", *Organisational Development Journal*, 26(4), pp. 89-103.
- Cross, D. E. (2014) "Global Diversity and Organizational Culture's Impact on Adaptation, Performance, and Innovation", in Erbe, N. D. (Eds.) *Approaches to Managing Organizational Diversity and Innovation*, IGI Global: Hershey, pp. 82-99.
- Crossan, M. M. & Apaydin, M. (2010) "A multi-dimensional framework of organisational innovation: A systematic review of the literature", *Journal of Management Studies*, 47(6), pp. 1154-91.
- Cua, F. C. (2012) "Applying 'Business Case' Construct Using the 'Diffusion of Innovations' Theory Framework: Empirical Case Study in the Higher Education", in Dwivedi, Y. K., Wade, M. R. & Schneberger, S. L. (Eds.) *Information systems theory: Explaining and predicting our digital society*, Springer: New York, pp. 303-33.
- Cummings, T. G. & Worley, C. G. (2008) *Organisational development and change*, 9<sup>th</sup> edn., Cengage Learning: Mason.
- Cunningham, J. B. (1993) *Action research and organisational development*. Westport, CT: Praeger.
- Curado, C. (2006) "Organisational learning and organisational design", *The Learning Organization*, 13(1), pp. 25-48.
- Cyert, R. M. & March, J. G. (1963) *A Behavioural Theory of the Firm*, Prentice-Hall: Englewood Cliffs, NJ.
- Damanpour, F. & Schneider, M. (2006) "Phases of the adoption of innovation in organizations: Effects of environment, organization and top managers", *British Journal of Management*, 17(3), pp. 215-36.
- Davis, F. D. (1989) "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, 13(3), pp. 319-40.
- Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989) "User acceptance of computer technology: A comparison of two theoretical models", *Management Science*, 35(8), pp. 982-1003.

- Davis, K. A. & Songer, A. D. (2009) “Resistance to IT change in the AEC industry: Are the stereotypes true?”, *Journal of Construction Engineering and Management*, 135(12), pp. 1324-33.
- Davis, K., Drey, N. & Gould, D. (2009) ‘What are scoping studies? A review of the nursing literature’, *International Journal of Nursing Studies*, 46(10), pp. 1386-400.
- Davison, R. M., Martinsons, M. & Kock, N. (2004) “Principles of canonical action research”, *Information Systems Journal*, 14(1), pp. 65–86.
- Dawson, P. (2003) *Organizational change: A processual approach*, Routledge: London.
- Dawson, P. (2014) “Reflections: On time, temporality and change in organizations”, *Journal of Change Management*, 14(3), pp. 285-308.
- De Rond, M. & Bouchikhi, H. (2004) “On the dialectics of strategic alliances”, *Organization Science*, 15(1), pp. 56-69.
- De Villiers, M. R. (2005) “Interpretive research models for Informatics: Action research, grounded theory, and the family of design-and development research”, *Alternation*, 12(2), pp. 10-52.
- Dekkers, C. A. & McQuaid, P. A. (2002) “The dangers of using software matrices to (mis)manage”, *IT Professional*, 4(2), pp. 24-30.
- Demers, C. (2007) *Organizational change theories: A synthesis*, Sage Publications: London.
- DePietro, R., Wiarda, E. & Fleischer, M. (1990) “The context for change: Organization, technology and environment”, in Tornatzky, L. G., Fleischer, M. & Chakrabarti, A. K. (Eds.) *The Process of Technological Innovation*, Lexington Books, Lexington, MA, pp. 151-75.
- De Waal, A., Duong, H., & Ton, V. (2009) “High performance in Vietnam: the case of the Vietnamese banking industry”, *Journal of Transnational Management*, 14(3), pp. 179-201.
- Doolin, B. (2004) “Power and resistance in the implementation of a medical management information system”, *Information Systems Journal*, 14(4), pp. 343-62.
- Drazin, R., Glynn, M. A. & Kazanjian, R. K. (2004) “Dynamics of structural change”, in Poole, M. S. & Van de Ven, A. H. (Eds.) *Handbook of*

- organizational change and innovation*, Oxford University Press: London, pp. 161-89.
- Dwivedi, Y. K., Wade, M. R. & Schneberger, S. L. (2012) *Information systems theory: Explaining and predicting our digital society*, Springer: New York.
- Eason, K. D. (2005) *Information technology and organisational change*, Taylor & Francis: London.
- Easterby-Smith, M., Thorpe, R., Jackson, P. & Lowe, A. (2008) *Management research*, 3<sup>rd</sup> edn., Sage Publications: London.
- Eisenhardt, K. M. & Graebner, M. E. (2007) “Theory building from cases: Opportunities and challenges”, *Academic of Management Journal*, 50(1), pp. 25-32.
- Elbanna, S. (2006) “Strategic decision-making: Process perspectives”, *International Journal of Management Reviews*, 8(1), pp. 1-20.
- Ellen, P. S., Bearden, W. O. & Sharma, S. (1991) “Resistance to technological innovations: An examination of the role of self-efficacy and performance satisfaction”, *Journal of the Academy of Marketing Science*, 19(4), pp. 297-307.
- Elving, W. J. L. (2005) “The role of communication in organisational change”, *Corporate Communications: An International Journal*, 10(2), pp. 129-38.
- Enns, H. G., Huff, S. L. & Higgins, C. A. (2003) “CIO lateral influence behaviours: Gaining peers’ commitment to strategic information systems”, *MIS Quarterly*, 27(1), pp. 155-76.
- Ensminger, D. C. & Surry, D. W. (2008) “Relative ranking of conditions that facilitate innovation implementation in the USA”, *Australasian Journal of Educational Technology*, 24(5), pp. 611-26.
- Erdogan, B., Anumba, C. J., Bouchlaghem, D. & Nielsen, Y. (2008) “Collaboration environments for construction: Implementation case studies”, *Journal of Management in Engineering*, 24(4), pp. 234-44.
- Erev, I., Ert, E. & Yechiam, E. (2008) “Loss aversion, diminishing sensitivity, and the effect of experience on repeated decisions”, *Journal of Behavioural Decision Making*, 21(5), pp. 575-97.
- Erwin, D. G. & Garman, A. N. (2010) “Resistance to organisational change: Linking research and practice”, *Leadership & Organisational Development Journal*, 31(1), pp. 39-56.

- Essick, K. (2005) "Innovation awards – Where are they now? A look at past winners of our innovation awards", *Wall Street Journal*, Vol. October 24.
- Fagenson-Eland, E., Ensher, E. A. & Burke, W. W. (2004) "Organization development and change interventions: A seven-nation comparison", *Journal of Applied Behavioural Science*, 40(4), pp. 432–64.
- Ferdig, M. A. & Ludema, J. D. (2002) "Transformative interactions: Relational principles to guide self-organising change", *Academy of Management Proceedings*, pp. 1-6.
- Ferneley, E. H. & Sobreperez, P. (2006) "Resist, comply or workaround? An examination of different facets of user engagement with information systems", *European Journal of Information Systems*, 15(4), pp. 345-56.
- Fidock, J. & Carroll, J. (2012). "Theorising about the life cycle of IT use: An appropriation perspective", in Hart, D. N. & Gregor, S. D. (Eds.) *Information Systems Foundations: Theory building in information systems*, ANU E PRESS: Canberra, Australia, pp. 79-112.
- Finch, H. & Lewis, J. (2008) "Focus groups", in Ritchie, J. & Lewis, J. (Eds.) *Qualitative research practice: A guide for social science students and researchers*, London: Sage Publications, pp. 170-93.
- Fishbein, M. & Azjen, I. (1975) *Belief, Attitude, Intention and Behaviour: An introduction to Theory and Research*, Addison-Wesley: Reading, MA.
- Forbes (2013) "Core banking replacement remains locked in the future" [Online]. Available at: <http://www.forbes.com/sites/tomgroenfeldt/2013/09/10/core-banking-replacement-remains-locked-in-the-future/> [Assessed on 19<sup>th</sup> Oct 2013].
- Ford, J. D. & Ford, L. W. (2009) "Decoding resistance to change", *Harvard Business Review*, April, pp. 1-7.
- Ford, J. D., Ford, L. W. & D'Amelio, A. (2008) "Resistance to change: The rest of the story", *Academy of Management Review*, 33(2), pp. 362-77.
- Ford, J. D., Ford, L. W. & McNamara, R. T. (2002) "Resistance and the background conversations of change", *Journal of Organizational Change Management*, 15(2), pp. 105-21.
- Ford, M. W. & Greer, B. M. (2005) "The relationship between management control system usage and planned change achievement: An exploratory study", *Journal of Change Management*, 5(1), pp. 29-46.

- Forman, J. & Damschroder, L. (2007) “Qualitative content analysis”, in Jacoby, L. & Siminoff, L. A. (Eds.) *Empirical methods for bioethics: A primer*. Advances in Bioethics, Volume 11, Emerald Group Publishing Limited: London, pp.39-62.
- Frisch, B. (2011). *Who's in the Room: How Great Leaders Structure and Manage the Teams Around Them*, John Wiley & Sons: San Francisco.
- Gewald, H. & Dibbern, J. (2009) “Risks and benefits of business process outsourcing: A study of transaction services in the German banking industry”, *Information & Management*, 46(4), pp. 249-57.
- Gibbert, M., Hoegl, M. & Valikangas, A. L. (2006) “In praise of resource constraints”, *MIT Sloan Management Review*, 48(3), pp. 15-7.
- Gibson, C. B. & Birkinshaw, J. (2004) “The antecedents, consequences, and mediating role of organizational ambidexterity”, *Academy of Management Journal*, 47(2), pp. 209–26.
- Ginzberg, M. J. (1980). The impact of organisational characteristics on MIS design and implementation. *Information Systems Working Papers Series, Vol.*
- Glaser, B. G. & Strauss, A. L. (1997) *The discovery of grounded theory: Strategies for qualitative research*, Aldine De Gruyter: Chicago.
- Glasgow, R. E. & Linnan, L. A. (2008) “Evaluation of theory-based interventions”, in Glanz, K., Rimer, B. K. & Viswanath, K (Eds.) *Health behaviour and health education: theory, research, and practice*, 4<sup>th</sup> edn., Jossey-Bass: San Francisco, pp. 487-508.
- Goldkuhl, G. & Cronholm, S. (2003) “Multi-grounded theory – Adding theoretical grounding to grounded theory”, in *The 2<sup>nd</sup> European Conference on Research Methods in Business Management*, Reading, UK, pp. 177-96.
- Goldkuhl, G. (2008) “Practical inquiry as action research and beyond”, in *Proceedings of the 16<sup>th</sup> European Conference on Information Systems*, Galway, Ireland, pp. 1-12.
- Goldkuhl, G. (2012) “From action research to practice research”, *Australasian Journal of Information Systems*, 17(2), pp. 57-78.
- GOV – Government Portal of Socialist Republic of Viet Nam (2015) “Socio-economic development plan for the 2011-2015 period” [Online]. Available at: <http://www.chinhphu.vn/portal/page/portal/English/strategies/strategiesdetails%3FcategoryId%3D30%26articleId%3D10052505> [Assessed on 9<sup>th</sup> April 2015].

- Graetz, F. & Smith, A. C. (2010) “Managing organizational change: A philosophies of change approach”, *Journal of Change Management*, 10(2), pp. 135-54.
- Greenwood, D. J. & Levin, M. (2007). *Introduction to action research: Social research for social change*, 2<sup>nd</sup> edn., Sage Publications: London.
- Greiner, L. E. & Cummings, T. G. (2004) “Wanted: OD more alive than dead!”, *Journal of Applied Behavioural Science*, 40(4), pp. 374–91.
- Gummesson, E. (2005) “Qualitative research in marketing”, *European Journal of Marketing*, 39(4), pp. 309-29.
- Gunby Jr. N. W. (2009) “Firm performance and complementary strategy development processes”, *Management Decision*, 47(5), pp. 806-18.
- Gupta, M. P., Kanungo, S., Kumar, R. & Sahu, G. P. V. (2007) “A study of IT effectiveness in select government organisations in India”, *The Journal for Decision Makers*, 32(2), pp. 7-21.
- Hackman, J. R. (2003) “Learning more by crossing levels: Evidence from airplanes, hospitals, and orchestras”, *Journal of Organisational Behaviour*, 24(1), pp. 905–922.
- Hannan, M. T. & Freeman, J. (1977) “The population ecology of organisations”, *American Journal of Sociology*, 82(5), pp. 929-64.
- Hargadon, A. & Sutton, R. I. (1997) “Technology brokering and innovation in a product development firm”, *Administrative Science Quarterly*, 42(4), pp. 716-49.
- Hartmann, T., Fischer, M. & Haymaker, J. (2009) “Implementing information systems with project teams using ethnographic–action research”, *Advanced Engineering Informatics*, 23(1), pp. 57-67.
- Hatch, M. J. & Cunliffe, A. L. (2006) *Organisation theory*, 2<sup>nd</sup> edn., Oxford University Press: Oxford.
- Hawari, A. A. & Heeks, R. (2010) “Explaining ERP failure in a developing country: A Jordanian case study”, *Journal of Enterprise Information Management*, 23(2), pp. 135-60.
- Hayes, J. (2014) *The theory and practice of change management*, Palgrave Macmillan: London.
- Hegel, G. W. F. (1969) *The Science of Logic*. George Allen & Unwin: London.
- Hender, J. M., Rodgers, T. L., Dean, D. L. & Nunamaker Jr, J. F. (2001) “Improving group creativity: Brainstorming versus non-brainstorming techniques in a GSS

- environment”, in *Proceedings of the 34th Annual Hawaii International Conference on System Sciences*, Maui, Hawaii, USA, pp. 1-10.
- Henderson, C., Beach, A. & Finkelstein, N. (2011) “Facilitating change in undergraduate STEM instructional practices: An analytic review of the literature”, *Journal of Research in Science Teaching*, 48(8), pp. 952-84.
- Henderson, J. C. & Venkatraman, H. (1999) “Strategic alignment: Leveraging information technology for transforming organisations”, *IBM Systems Journal*, 38(2-3), pp. 472-84.
- Hensmans, M. (2003) “Social movement organizations: A metaphor for strategic actors in institutional fields”, *Organization Studies*, 24(3), pp. 355-81.
- Herold, D. M., Farmer, S. M. & Mobley, M. I. (1995) “Pre-implementation attitudes toward the introduction of robots in a unionized environment”, *Journal of Engineering and Technology Management*, 12(3), pp. 155–73.
- Herr, K. & Anderson, G. L. (2005) *The action research dissertation: A guide for students and faculty*, Sage Publications: London.
- Herring, S. R.; Jones, B. R. & Bailey, B. P. (2009) “Idea generation techniques among creative professionals”, in *Proceeding of the 42<sup>nd</sup> Hawaii International Conference on System Sciences*, pp. 1-10.
- Hesse-Biber, S. N. & Leavy, P. (2010) *The practice of qualitative research*, 2<sup>nd</sup> edn., Sage Publications: Thousand Oaks: California.
- Hickman, G. R. (2010) *Leading change in multiple contexts: Concepts and practices in organizational, community, political, social, and global change settings*, Sage Publications: Thousand Oaks, California.
- Hillman, A. J., Withers, M. C. & Collins, B. J. (2009) “Resource dependence theory: A review”, *Journal of Management*, 35(6), pp. 1404-27.
- Ho, A. & Baxter, R. A. (2011) “Banking reform in Vietnam”, *Asia Focus*, Vol. June.
- Hong, K. & Kim, Y. (2002) “The critical success factors for ERP implementation: An organizational fit perspective”, *Information & Management*, 40(1), pp. 25–40.
- Hoos, I. R. (1960) “When the computer takes over the office”, *Harvard Business Review*, 38(1), pp. 102-12.
- House, R. J., Javidan, M., Dorfman, P. W. & Gupta, V. (2004) *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, Sage: Thousand Oaks, CA.



- Hsieh, H. F. & Shannon, S. E. (2005) "Three approaches to qualitative content analysis", *Qualitative Health Research*, 15(9), pp. 1277-88.
- IBM (2012) "Core banking modernisation" [Online]. Available at: [http://www.ibm.com/smarterplanet/global/files/us\\_\\_en\\_us\\_\\_Core\\_Banking\\_Modernisation.pdf](http://www.ibm.com/smarterplanet/global/files/us__en_us__Core_Banking_Modernisation.pdf) [Accessed on 24<sup>th</sup> Jul 2012].
- IMF – International Monetary Fund (2013) "Inflation dynamics and monetary policy transmission in Vietnam and Emerging Asia" [Online]. Available at: <http://www.imf.org/external/pubs/ft/wp/2013/wp13155.pdf> [Assessed on 3<sup>rd</sup> Jun 2013].
- Ison, R. L. (2008) "Systems thinking and practice for action research", in Reason, P. & Bradbury, H. (Eds.) *The SAGE Handbook of Action Research: Participative Inquiry and Practice*, 2<sup>nd</sup> edn., Sage Publications: London, pp. 139-58.
- Iversen, J. H., Mathiassen, L. & Nielsen, P. A. (2004) "Managing risk in software process improvement: An action research approach", *MIS Quarterly*, 28(3), pp. 395-433.
- Jablokow, K. W., Jablokow, A. G. & Seasock, C. T. (2010) "IT leadership from a problem solving perspective", *Information Technology and Management*, 11(3), pp. 107-22.
- Jaggy (2013) "How to implement a successful CBS project" [Online]. Available at: [http://www.jaggy.com/brochures/JAGGY\\_core\\_banking.pdf](http://www.jaggy.com/brochures/JAGGY_core_banking.pdf) [Accessed on 17<sup>th</sup> Dec 2013].
- James, M. & Ward, K. (2001) "Leading a multinational team of change agents at Glaxo Wellcome (now Glaxo SmithKline)", *Journal of Change Management*, 2(2), pp. 148-59.
- Jeyaraj, A., Rottman, J. W. & Lacity, M. C. (2006) "A review of the predictors, linkages, and biases in IT innovation adoption research", *Journal of Information Technology*, 21(1), pp. 1-23.
- Johnson, G., Scholes, K. & Whittington, R. (2005) *Exploring corporate strategy: Text and cases*, 7<sup>th</sup> edn., Prentice Hall: London.
- Jones, B. B. & Brazzel, M. (2006) *The NTL handbook of organization development and change: Principles, practices, and perspectives*, Pfeiffer: San Francisco.
- Joshi, K. (1991) "A model of users' perspective on change: The case of information systems technology implementation", *MIS Quarterly*, 15(2), pp. 229-42.

- Joshi, K. (2005) "Understanding user resistance and acceptance during the implementation of an order management system: A case study using equity implementation model", *Journal of Information Technology Case and Application Research*, 7(1), pp. 6-20.
- Judah, M. L. & Richardson, G. (2010) "Self-improvement or Lived practice: The divergent cultures of Action Research", in Huber-Warring, T. (Eds.) *Storied inquiries in international landscapes: An anthology of educational research*, Information Age Publishing: North Carolina, pp. 419-22.
- Junarsin, E. (2009) "Managing discontinuous innovation", *International Management Review*, 5(1), pp. 10-8.
- Kahneman, D. & Tversky, A. (1979) "Prospect theory: An analysis of decision under risk", *Econometrica: Journal of the Econometric Society*, 47(2), pp. 263-91.
- Kanter, R. M. (1983) *The Change Masters*, Simon & Schuster: New York.
- Kaplan, R. & Norton, D. P. (2001) *The Strategy-focused organization*, Harvard Business School Publishing Corporation: Boston, MA.
- Kaya, N. & Patton, J. (2011) "The effects of knowledge-based resources, market orientation and learning orientation on innovation performance: An empirical study of Turkish firms", *Journal of International Development*, 23(2), pp. 204-19.
- Ke, W. & Wei, K. K. (2008) "Organizational culture and leadership in ERP implementation", *Decision Support Systems*, 45(2), pp. 208-18.
- Kezar, A. (2012) "Organizational Change in a Global, Postmodern world", in Bastedo, M. N. (Eds.) *The organization of higher education: Managing colleges for a new era*, John Hopkins University Press: Maryland, pp. 1971-91.
- Khazanchi, D. (2005) "Information technology (IT) appropriateness: The contingency theory of "FIT" and IT Implementation in small and medium enterprises", *The Journal of Computer Information Systems*, 45(3), pp. 88-95.
- Kickert, W. J. (2010) "Managing emergent and complex change: The case of dutch agencification", *International Review of Administrative Sciences*, 76(3), pp. 489-515.
- Kim, H. W. & Kankanhalli, A. (2009) "Investigating user resistance to information systems implementation: A status quo bias perspective", *MIS Quarterly*, 33(3), pp. 567-82.

- Kim, H. W. (2011) "The effects of switching costs on user resistance to enterprise systems implementation", *IEEE Transactions on Engineering Management*, 58(3), pp. 471-82.
- Kirchgeorg, M., Jung, K. & Klante, O. (2010) "The future of trade shows: Insights from a scenario analysis", *Journal of Business & Industrial Marketing*, 25(4), pp. 301-12.
- Klaus, T. & Blanton, J. E. (2010) "User resistance determinants and the psychological contract in enterprise system implementations", *European Journal of Information Systems*, 19(6), pp. 625-36.
- Klewes, J. & Langen, R. (2008) *Change 2.0: Beyond organisational transformation*, Springer: Berlin.
- Kling, R. (1980) "Social analysis of computing: Theoretical perspectives in recent empirical research", *Computing Surveys*, 12(1), pp. 61-110.
- Knodel, T. (2004) "Preparing the organizational 'soil' for measurable and sustainable change: Business value management and project governance", *Journal of Change Management*, 4(1), pp. 45-62.
- Kock, N. (2004) "The three threats of action research: a discussion of methodological antidotes in the context of an information systems study", *Decision Support Systems*, 37(2), pp. 265-86.
- Kotter, J. P. & Schlesinger, L. A. (2008) "Choosing strategies for change", *Harvard Business Review*, July-August, pp. 130-9.
- Kotter, J. P. (1995) "Why Transformation Efforts Fail", *Harvard Business Review*, March-April, pp. 59-67.
- Kotter, J. P. (2008) *A sense of urgency*, Harvard Business Press: Massachusetts.
- Krell, K., Matook, S., & Rohde, F. (2008) "Understanding information system change: The relationship between reasons, goals, and types", in *12<sup>th</sup> Pacific Asia Conference on Information Systems (Pacis 2008)*, Suzhou, China, pp. 1202-13.
- Kroeze, J. H. (2012) "Interpretivism in IS – A Postmodernist (or Postpositivist?) knowledge theory", in *Proceedings of the 18<sup>th</sup> Americas Conference on Information Systems*, Seattle, Washington, pp. 1-8.
- Krotov, V., Boukhonine, S. & Ives, B. (2011) "ERP Implementation Gone Terribly Wrong: The Case of Natural Springs", *Communications of the Association for Information Systems*, 28(18), pp. 277-82.

- Kwahk, K. Y. & Kim, H. W. (2008) “Managing readiness in enterprise systems-driven organisational change”, *Behaviour & Information Technology*, 27(1), pp. 79-87.
- Lahiri, S. & Kedia, B. L. (2011) “Co-evolution of institutional and organizational factors in explaining offshore outsourcing”, *International Business Review*, 20(3), pp. 252-63.
- Lai, V. S. & Mahapatra, R. K. (2004) “Correlating business process re-engineering with the information systems department”, *International Journal of Production Research*, 42(12), pp. 2357-82.
- Langley, A. (1999) “Strategies for theorizing from process data”, *Academy of Management Review*, 24(4), pp. 691-710.
- Langley, A., Kakabadse, N. K. & Swales, S. (2007) “Strategy development in a transitional economy: the case of LEK”, *Strategic Change*, 16(4), pp. 161-76.
- Lapointe, L. & Rivard, S. (2005) “A multilevel model of resistance to information technology implementation”, *MIS Quarterly*, 29(3), pp. 461–91.
- Laumer, S. & Eckhardt, A. (2012) “Why do people reject technologies: A review of user resistance theories”, in Dwivedi, Y. K., Wade, M. R. & Schneberger, S. L. (Eds.) *Information systems theory*, Springer: New York, pp. 63-86.
- Laumer, S. (2011) “Why do people reject technology – A literature-based discussion of the phenomena ‘Resistance to change’ in information systems and managerial psychology research”, in *ECIS 2011 Proceedings*, Helsinki, Finland, pp. 1-12.
- Lavidge, R. J. & Steiner, G. A. (1961) “A model for predictive measurements of advertising effectiveness”, *Journal of Marketing*, 25(4), pp. 59-62.
- Le, N. H. (2014) “Changing from e-payment to m-payment: the role of switching barriers”, in *British Academy of Management (BAM) Conference Proceedings*, Belfast, Northern Ireland, pp. 1-27.
- Leahy, L. & Chamberlain, N. (2008) “Surviving change”, *Strategic HR Review*, 7(6), pp. 23-9.
- Lee-Kelley, L. (2002) “Situational leadership: Managing the virtual project team”, *Journal of Management Development*, 21(6), pp. 461-76.
- Leon, A. (2008) *Enterprise Resource Planning*, 2<sup>nd</sup> edn., McGraw Hill: New Delhi.
- Leung, S. (2009) “Banking and financial sector reforms in Vietnam”, *ASEAN Economic Bulletin*, 26(1), pp. 44-57.

- Lewin, K. (1946) "Action research and minority problems", *Journal of Social Issues*, 2(1), pp. 34-46.
- Lewin, K. (1947) "Frontiers in group dynamics: concept, method and reality in social sciences: social equilibria and social change", *Human Relations*, 1(1), pp. 5-41.
- Lewin, K. (1951) *Field theory in social science*, Harper and Row: New York.
- Lin, H. F. & Lee, G. G. (2006) "Effects of socio-technical factors on organizational intention to encourage knowledge sharing", *Management Decision*, 44(1), pp. 74-88.
- Lindgren, R., Henfridsson, O. & Schultze, U. (2004) "Design principles for competence management systems: A synthesis of an action research study", *MIS Quarterly*, 28(3), pp. 435-72.
- Liu, Y. (2009). "Analysis and evaluation of organizational change approaches", *International Journal of Business and Management*, 4(12), pp. 234-8.
- Livne-Tarandach, R. & Bartunek, J. M. (2009) "A new horizon for organizational change and development scholarship: Connecting planned and emergent change", *Research in Organizational Change and Development*, 17(1), pp. 1-35.
- Lorenzi, N. M. & Riley, R. T. (2003) "Organisational issues = change", *International Journal of Medical Informatics*, 69(2), pp. 197-203.
- Love, A. (2004) "Implementation evaluation", in Wholey, J. S., Hatry, H. P., & Newcomer, K. E. (ed.) *Handbook of practical program evaluation*, 2<sup>nd</sup> edn., John Wiley & Sons: San Francisco, pp. 63-97.
- Lowe, A. & McIntosh, A. (2007) "Knowledge management in a New Zealand tree farming company", *Journal of Organisational Change Management*, 20(4), pp. 539-58.
- Luecke, R. (2003) *Managing change and transition*, Harvard Business School Press: Boston.
- Lundblad, J. P. (2003) "A review and critique of Rogers' diffusion of innovation theory as it applies to organizations", *Organization Development Journal*, 21(4), pp. 50-64.
- Luscher, L. S. & Lewis, M. W. (2008) "Organisational change and managerial sense-making: Working through paradox", *Academy of Management Journal*, 51(2), pp. 221-40.

- Lyytinen, K. & Damsgaard, J. (2001) "What's wrong with the diffusion of innovation theory?", in Ardis, M. A. & Marcolin, B. L. (Eds.) *Diffusing Software Product and Process Innovations*, Springer: New York, pp. 173-90.
- Maditinos, D., Chatzoudes, D. & Tsairidis, C. (2011) "Factors affecting ERP system implementation effectiveness", *Journal of Enterprise Information Management*, 25(1), pp. 60-78.
- Maes, G., & Van Hootegem, G. (2011) "Toward a dynamic description of the attributes of organizational change", in Shani, A. B., Woodman, R. W. & Pasmore, W. A. (Eds.) *Research in Organizational Change and Development Vol. 19*, Emerald Group Publishing Ltd: London, pp. 191-231.
- Markus, M. L. (1983) "Power, Politics, and MIS implementation", *Communications of the ACM*, 26(6), pp. 430-44.
- Markus, M. L. & Robey, D. (1980). The organisational validity of management information systems. *Sloan Working Papers No. 1212-81*.
- Martins, E. C. & Terblanche, F. (2003) "Building organizational culture that stimulates creativity and innovation", *European Journal of Innovation Management*, 6(1), pp. 64-74.
- Mason, R. (2007) "The external environment's effect on management and strategy. A complexity theory approach", *Management Decision*, 45(1), pp.10-28.
- Mathiassen, L. & Vainio, A. M. (2007) "Dynamic capabilities in small software firms: A sense-and-respond approach", *IEEE Transactions on Engineering Management*, 54(3), pp. 522-38.
- Mathiassen, L. (1981) *Systems Development and Systems Development Methods. University of Aarhus, Aarhus, Ph. D. Dissertation DAIMI PB-136*.
- Mathiassen, L. (1998) "Reflective systems development", *Scandinavian Journal of Information Systems*, 10(1), pp. 1-68.
- Mathiassen, L. (2002) "Collaborative practice research", *Information Technology & People*, 15(4), pp. 321-45.
- Mathiassen, L., Chiasson, M. & Germonprez, M. (2012) "Style composition in action research publication", *MIS Quarterly*, 36(2), pp. 347-63.
- Mathiassen, L., Pries-Heje, J. & Ngwenyama, O. (2002) *Improving Software Organizations - From Principles to Practice*, Addison-Wesley: Upper Saddle River, NJ.

- McFarlan, W. (1982) "Portfolio approach to Information Systems", *Journal of Systems Management*, 33(1), pp. 12-19.
- McGrath, J. (1982) "Dilemmatics: The Study of Research Choices and Dilemmas", in McGrath, J., Martin, J. & Kulka, R. (Eds.) *Judgment Calls in Research*, Sage Press: Beverly Hills, pp. 69-102.
- McIntyre, A. (2008) *Participatory action research*, Sage Publications: London.
- McKay, J. & Marshall, P. (2001) "The dual imperatives of action research", *Information Technology & People*, 14(1), pp. 46-59.
- McNiff, J. (2002) *Action research for professional development: Concise advice for new action researchers*, 3<sup>rd</sup> edn., Jean McNiff Publisher: Dorset, England.
- Meissonier, R. & Houze, E. (2010) "Toward an IT conflict-resistance theory: Action research during IT pre-implementation", *European Journal of Information Systems*, 19(1), pp. 540-61.
- Mento, A. J., Jones, R. M. & Dirndorfer, W. (2002) "A change management process: Grounded in both theory and practice", *Journal of Change Management*, 3(1), pp. 45-59.
- Mezirow, J. (1991) *Transformative dimensions of adult learning*, Jossey-Bass: San Francisco.
- Microsoft (2008) "Core banking partner guide 2008" [Online]. Available at: <http://download.microsoft.com/download/corebankingpartnerguide.pdf> [Accessed on 17th April 2008].
- Micheal, D. (1964) "Speculations on the relation of the computer to individual freedom and the right to privacy", *George Washington Law Review*, 33(1), pp. 270-86.
- Miller, D. (2003) "The stages of group development: A retrospective study of dynamic team processes", *Canadian Journal of Administrative Sciences*, 20(2), pp.121-43.
- Mintzberg, H. (1980) "Structure in 5's: A Synthesis of the Research on Organization Design", *Management Science*, 26(3), pp. 322-41.
- Mintzberg, H., Ahlstrand, B. W., Ahlstrand, B., & Lampel, J. (2005) *Strategy Safari: A Guided Tour Through The Wilds of Strategic Management*, Simon and Schuster: New York.
- Molla, A. & Licker, P. S. (2005) "E-commerce adoption in developing countries: A model and instrument", *Information & Management*, 42(6), pp. 877-99.

- Moran, J. W. & Brightman, B. K. (2001) "Leading organizational change", *Career Development International*, 6(2), pp.111-19.
- Morgan, G. (1986) *Images of Organizations*, Sage: Beverly Hills, CA, USA.
- Mosdell, C., Metcalf, J. & Sanchez, L. (2013) "Getting to the core: How to run a core banking project", *IBS Journal*, pp. 1-27.
- Nah, F. H. & Delgado, S. (2006) "Critical success factors for enterprise resource planning implementation and upgrade", *Journal of Computer Information Systems*, 46(5), pp. 99-113.
- Nanji, K. C., Cina, J., Patel, N., Churchill, W., Gandhi, T. K. & Poon, E. G. (2009) "Overcoming barriers to the implementation of a pharmacy bar code scanning system for medication dispensing: A case study", *Journal of the AMIS*, 16(5), pp. 645-50.
- Neuendorf, K. A. (2002) *The content analysis guidebook*, Sage Publications: London.
- Ngai, E. W. T., Law, C. C. H. & Wat, F. K. T. (2008) "Examining the critical success factors in the adoption of enterprise resource planning", *Computers in Industry*, 59(6), pp. 548-64.
- Ngo, D. T. (2012) "Measuring the performance of the banking system: case of Vietnam (1990-2010)", *Journal of Applied Finance and Banking*, 2(2), pp. 289-312.
- Nguyen, T. H. (2009) "Information technology adoption in SMEs: An integrated framework", *International Journal of Entrepreneurial Behaviour & Research*, 15(2), pp. 162-86.
- Nilakant, V. & Ramanarayan, S. (2006) *Change management: Altering mind-sets in a global context*, Sage Publications: London.
- Nissen, M. E. & Burton, R. M. (2011) "Designing organizations for dynamic fit: System stability, maneuverability, and opportunity loss", *IEEE Transactions on Systems, Man and Cybernetics*, 41(3), pp. 418-33.
- Noolan, J. A. C. (2006) "Organisation diagnosis phase", in Jones, B. B., & Brazzel, M. (Eds.) *The NTL handbook of organization development and change: Principles, practices, and perspectives*, Pfeiffer: San Francisco, pp. 192-211.
- Nordheim, S. & Paivarinta, T. (2006) "Implementing enterprise content management: From evolution through strategy to contradictions out-of-the-box", *European Journal of Information Systems*, 15(6), pp. 648-62.



- Nordheim, S. (2011) "Towards understanding contradictions in enterprise system implementations—insights from a case study", in Pokorny, J., Repa, V., Richta, K., Wojtkowski, W., Linger, H., Barry, C. & Lang, M. (Eds.) *Information Systems Development: Business Systems and Services: Modelling and Development*, Springer: New York, pp. 563-74.
- Norman, D. A. & Verganti, R. (2014) "Incremental and radical innovation: Design research vs. technology and meaning change", *Design Issues*, 30(1), pp. 78-96.
- Nygaard, K. & Sorgaard, P. (1987) "The perspective concept in informatics", in Bjercknes, G., Ehn, P. & Kyng, M. (Eds.) *Computers and Democracy*, Avebury: Aldershot, pp. 371-93.
- Oliveira, T. & Martins, M. F. (2011) "Literature review of information technology adoption models at firm level", *The Electronic Journal Information Systems Evaluation*, 14(1), pp. 110-21.
- Oliver, C. (1991) "Strategic responses to institutional processes", *Academy of Management Review*, 16(1), pp. 145-79.
- Oliver-Hoyo, M. T. & Allen, D. (2006) "The use of triangulation methods in qualitative educational research", *Journal of College Science Teaching*, 35(4), pp. 42-7.
- Oreg, S., Mahmut, B., Maria, V., Luis, A., Achilles, A., Rasa, B., Nikos, B., Yuka, F., Luis, G., Jian, H., Martina, H., Nerima, J., Jana, K., Hitoshi, M., Boris, M., Ivana, F., Marina, K. T., Sandra, O., Per, O. S., Hilde, H. & Ingvild, S. (2008) "Dispositional resistance to change: Measurement equivalence and the link to personal values across 17 nations", *Journal of Applied Psychology*, 93(4), pp. 935-44.
- Orlikowski, W. J. & Baroudi, J. J. (1991) "Studying information technology in organizations: Research approaches and assumptions", *Information Systems Research*, 2(1), pp. 1- 28.
- O'Sullivan, K. J. (2007) "Creating and executing an internal communications plan for knowledge management systems deployments", *Journal of Knowledge Management*, 11(2), pp. 102-8.
- Overcoming resistance to change – Isn't it obvious?* 2010, animated movie, 17<sup>th</sup> Jul, viewed 25<sup>th</sup> Nov, 2013, < <http://www.youtube.com/watch?v=hcZ1aZ60k7w>>.
- Ozanne, J. L. & Saatcioglu, B. (2008) "Participatory action research", *Journal of Consumer Research*, 35(1), pp. 423-39.

- Patton, M. Q. (2002) *Qualitative research and evaluation methods*, 3<sup>rd</sup> edn., Sage Publications: Thousand Oaks, California.
- Paulus, P. B. & Nijstad, B. A. (2003) *Group creativity: Innovation through collaboration*, Oxford University Press: New York.
- Pearlson, K. E. & Saunders, C. S. (2012) *Managing and using information systems: A strategic approach*, 5<sup>th</sup> edn., John Wiley & Sons Inc.: New York.
- Pettigrew, A. M. (2014) *The politics of organizational decision-making*, Routledge: London.
- Pfeffer, J. & Salancik, G. R. (1978) *The external control of organizations: A resource dependence perspective*, Harper and Row: New York.
- Pfeffer, J. & Salancik, G. R. (2003) *The external control of organizations: A resource dependence perspective*, Stanford University Press: California.
- Plowman, D. A., Baker, L. T., Beck, T. E., Kulkarni, M., Solansky, S. T. & Travis, D. V. (2007) "Radical change accidentally: The emergence and amplification of small change", *Academy of Management Journal*, 50(3), pp. 515-43.
- Poole, M. S. & Van de Ven, A. H. (2004) *Handbook of organizational change and innovation*, Oxford University Press: New York.
- Popova, V. & Sharpanskykh, A. (2010) "Modelling organizational performance indicators", *Information Systems*, 35(4), pp. 505-27.
- Premkumar, G. (2003) "A meta-analysis of research on information technology implementation in small business", *Journal of Organizational Computing and Electronic Commerce*, 13(2), pp. 91–121.
- Pugh, L. (2007) *Change management in information system services*, 2<sup>nd</sup> edn., Ashgate: Aldershot.
- Puhakainen, P. & Siponen, M. (2010) "Improving employees' compliance through information systems security training: an action research study", *MIS Quarterly*, 34(4), pp. 757-78.
- Rahim, M. A. (2011) *Managing conflict in organizations*, 4<sup>th</sup> edn., Transaction Publishers: New Jersey.
- Randall, J. (2004) *Managing change, changing managers*. Routledge: London.
- Rantapuska, T. & Ihanainen, O. (2008) "Acquiring Information Systems through Organisational Learning", in 2<sup>nd</sup> *European Conference on Information Management and Evaluation*, London, UK, pp. 363-70.

- Rasche, A. (2007) *The paradoxical foundation of strategic management*, Springer Science & Business Media: Hamburg.
- Reason, P. & Bradbury, H. (2001) *Handbook of action research: Participative inquiry and practice*, Sage Publications: Thousand Oaks, CA.
- Reason, P. (2006) "Choice and quality in action research practice", *Journal of Management Inquiry*, 15(2), pp. 187-203.
- Ritchie, J. & Lewis, J. (2008) *Qualitative research practice: A guide for social science students and researchers*, Sage Publications: London.
- Rivard, S. & Lapointe, L. (2012) "Information technology implementers' responses to user resistance: Nature and effects", *MIS Quarterly*, 36(3), pp. 897-920.
- Rizzuto, T. E. & Reeves, J. (2007) "A multidisciplinary meta-analysis of human barriers to technology implementation", *Consulting Psychology Journal: Practice and Research*, 59(3), pp. 226-40.
- Robbins, S. (2003) *Organisational behaviour*, 10<sup>th</sup> edn., Prentice Hall: Upper Saddle River, NJ.
- Rogers, E.M. (1995) *Diffusion of innovations*, 4<sup>th</sup> edn., Free Press: New York.
- Rosenberg, M. J., & Hovland, C. I. (1960) "Cognitive, affective, and behavioural components of attitudes", in Rosenberg, M. J., Hovland, C. I., McGuire, W. J., Abelson, R. P. & Brehm, J. W. (Eds.), *Attitude organization and change*, Yale University Press: New Haven, Connecticut, pp. 1 – 14.
- Rothenberg, S. & Zyglidopoulos, S. C. (2007) "Determinants of environmental innovation adoption in the printing industry: the importance of task environment", *Business Strategy and the Environment*, 16(1), pp. 39-49.
- Rousseau, D. M. (1995) *Psychological contracts in organizations: Understanding written and unwritten agreements*, SAGE: Thousand Oaks, CA.
- Ruiz-Mercader, J., Meroño-Cerdan, A. L. & Sabater-Sánchez, R. (2006) "Information technology and learning: Their relationship and impact on organisational performance in small businesses", *International Journal of Information Management*, 26(1), pp. 16-29.
- Saiyadain, M. S. (2009) *Human Resources Management*, 4<sup>th</sup> edn., Tata McGraw-Hill: New Delhi.
- Samuelson, W. & Zeckhauser, R. (1988) "Status quo bias in decision making", *Journal of Risk and Uncertainty*, 1(1), pp. 7-59.

- Sanford, C. & Oh, H. (2010) “The role of user resistance in the adoption of a mobile data service”, *Cyber-psychology, Behaviour, and Social Networking*, 13(6), pp. 663-72.
- Saunders, M., Lewis, P. & Thornhill, A. (2009) *Research methods for business students*, 5<sup>th</sup> edn., Pearson Education Limited: Harlow.
- Schein, E. H. (1999) *Process consultation revisited: Building the helping relationship*, Addison-Wesley Reading: MA.
- Schon, D. A. (1983) *The Reflective Practitioner: How Professionals Think in Action*, Basic Books: New York.
- Schultz, R. L. & Slevin, D. P. (1975) *Implementing operations research/management science*, American Elsevier: New York.
- Scott, J. E. & Vessey, I. (2002) “Managing risks in enterprise systems implementations”, *Communications of the ACM*, 45(4), pp. 74 – 81.
- Scott, W. R. (2003) *Organisations: Rational, Natural and Open Systems*, 5<sup>th</sup> edn., Prentice Hall: Inglewood Cliffs, N.J.
- Sekaran, U. (2003) *Research methods for business: A skill building approach*, John Wiley & Sons Inc.: New York.
- Selander, L. & Henfridsson, O. (2012) “Cynicism as user resistance in IT implementation”, *Information Systems Journal*, 22(4), pp. 289-312.
- Senior, B. & Swales, S. (2010) *Organisational change*, 4<sup>th</sup> edn., Prentice Hall: London.
- Senior, B. (2002) *Organisational change*, 2<sup>nd</sup> edn., Prentice Hall: London.
- Shang, S. & Su, T. (2004) “Managing user resistance in enterprise systems implementation”, in *Americas Conference on Information Systems Proceedings*, New York, USA, pp. 149-53.
- Shih, H. P. (2008) “Continued use of a Chinese online portal: an empirical study”, *Behaviour and Information Technology*, 27(3), pp. 201–9.
- Simcrest (2013) “What is 3-tier (multi-tier) architecture and why do we need it?” [Online]. Available at: <http://blog.simcrest.com/what-is-3-tier-architecture-and-why-do-you-need-it/> [Accessed on 17<sup>th</sup> Dec 2013].
- Simon, H. A. (1965) *The shape of automation for men and management*, Harper and Row: New York.
- Smith, K. K. & Berg, D. N. (1987) *Paradoxes of group life: Understanding conflict, paralysis, and movement in group dynamics*, Jossey-Bass: San Francisco.

- Smith, W. K. & Lewis, M. W. (2011) "Toward a theory of paradox: A dynamic equilibrium model of organizing", *Academy of Management Review*, 36(2), pp.381-403.
- Smith, W. K., Binns, A. & Tushman, M. L. (2010) "Complex business models: Managing strategic paradoxes simultaneously", *Long Range Planning*, 43(2), pp. 448-61.
- Spencer, D., Zimmerman, A. & Abramson, D. (2011) "Special theme: project management in e-science: challenges and opportunities", *Computer Supported Cooperative Work*, 20(3), pp. 155-63.
- Spencer, L., Ritchie, J. & O'Connor, W. (2008) "Analysis: Practices, principles and processes", in Ritchie, J. & Lewis, J. (Eds.) *Qualitative research practice: A guide for social science students and researchers*, Sage Publications: London, pp. 200-13.
- Stacey, R. D. (2003) *Strategic management and organisational dynamics: The challenge of complexity*, Prentice-Hall: Harlow.
- Stevens, G. W. (2013) "Toward a processed-based approach of conceptualising change readiness", *The Journal of Applied Behavioural Science*, 49(3), pp. 333-60.
- Stoel, M. D. & Muhanna, W. A. (2009) "IT capabilities and firm performance: A contingency analysis of the role of industry and IT capability type", *Information & Management*, 46(3), pp. 181-9.
- Straub, D., Weill, P. & Schwaig, K. S. (2008) "Strategic dependence on the IT resource and outsourcing: A test of the strategic control model", *Information Systems Frontiers*, 10(2), pp. 195-210.
- Street, C. T. & Meister, D. B. (2004) "Small business growth and internal transparency: The role of information systems", *MIS Quarterly*, 28(3), pp. 473-506.
- Stringer, E. T. (2007) *Action research*, 3<sup>rd</sup> edn., Sage Publications: Thousand Oaks, CA.
- Susman, G. I. & Evered, R. D. (1978) "An assessment of the scientific merits of action research", *Administrative Science Quarterly*, 23(4), pp. 582-603.
- Sutanto, J., Kankanhalli, A., Tay, J., Raman, K. S. & Tan, B. C. (2008) "Change management in inter-organizational systems for the public", *Journal of Management Information Systems*, 25(3), pp. 133-76.

- Thaler, R. (1980) "Toward a positive theory of consumer choice", *Journal of Economic Behaviour & Organisation*, 1(1), pp. 39-60.
- The Saigon Times (2014) "Vietnam yet to benefit from global recovery" [Online]. Available at: <http://english.thesaigontimes.vn/Home/business/vietnam-economy/32972/WB-Vietnam-yet-to-benefit-from-global-recovery.html> [Assessed on 3<sup>rd</sup> Jan 2014].
- Thomas, A. B. (2003) *Controversies in Management: Issues, Debates, Answers*, Routledge: London.
- Thomas, R. & Hardy, C. (2011) "Reframing resistance to organisational change", *Scandinavian Journal of Management*, 27(3), pp. 322-31.
- Tjornehoj, G. & Mathiassen, L. (2010) "Improvisation during process-technology adoption: A longitudinal study of a software firm", *Journal of Information Technology*, 25(1), pp. 20-34.
- Tscherning, H. & Damsgaard, J. (2008) "Understanding the diffusion and adoption of telecommunication innovations: What we know and what we don't know", in Leon, G. Bernardos, A. M., Casar, J. R., Kautz, K. DeGross, J. I. (Eds.) *Open IT-Based Innovation: Moving Towards Cooperative IT Transfer and Knowledge Diffusion*, Springer: New York, pp 39-60.
- Tscherning, H. (2011) "A Multilevel Social Network Perspective on IT Adoption", in Dwivedi, Y. K., Wade, M. R. & Schneberger, S. L. (Eds.) *Information Systems Theory: Explaining and Predicting Our Digital Society*, Springer: New York, pp. 409-39.
- Tuckman, B. W. & Jensen, M. A. C. (1977) "Stages of small-group development revisited", *Group & Organization Management*, 2(4), pp.419-27.
- Tuckman, B. W. (1965) "Developmental sequence in small groups", *Psychological Bulletin*, 63(1), pp.384-99.
- Umble, E. J., Haft, R. R. & Umble, M. M. (2003) "Enterprise resource planning: Implementation procedures and critical success factors", *European Journal of Operational Research*, 14(6), pp. 241-57.
- Vakola, M. & Nikolaou, I. (2005) "Attitudes toward organisational change: What is the role of employees' stress and commitment?", *Employee Relations*, 27(2) pp. 160-74.
- Van de Ven, A. H. & Hargrave, T. J. (2004) "Social, technical, and institutional change: A literature review and synthesis", in Poole, M. S. & Van de Ven, A. H.

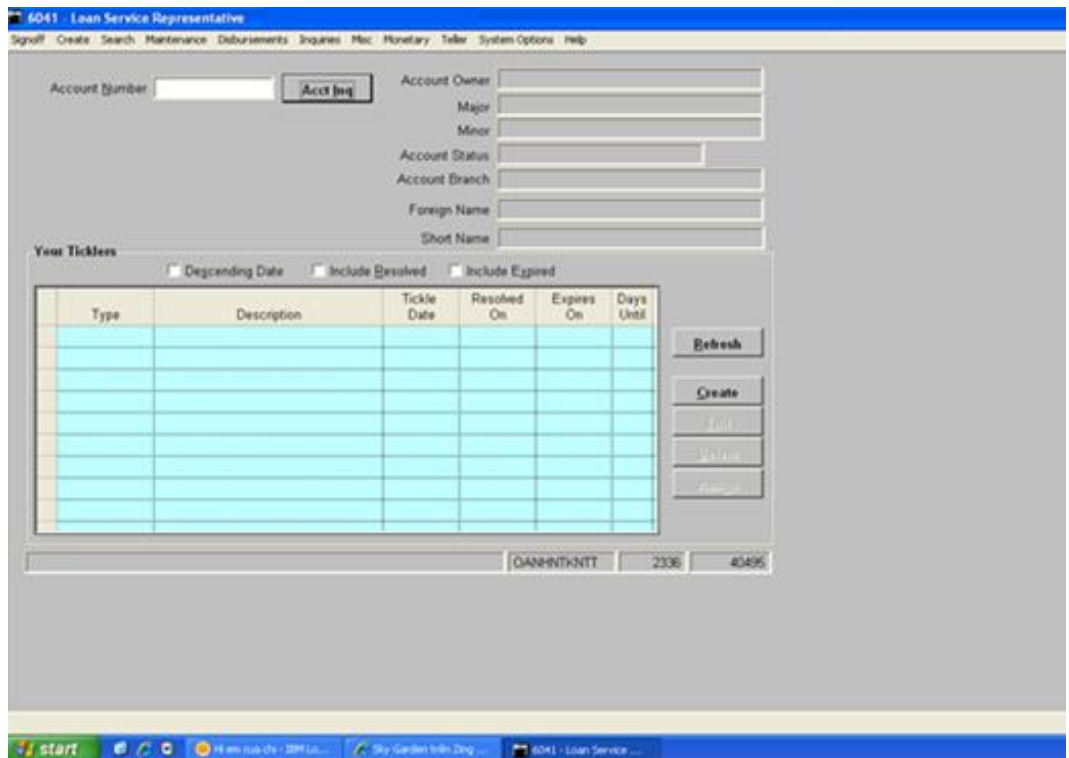
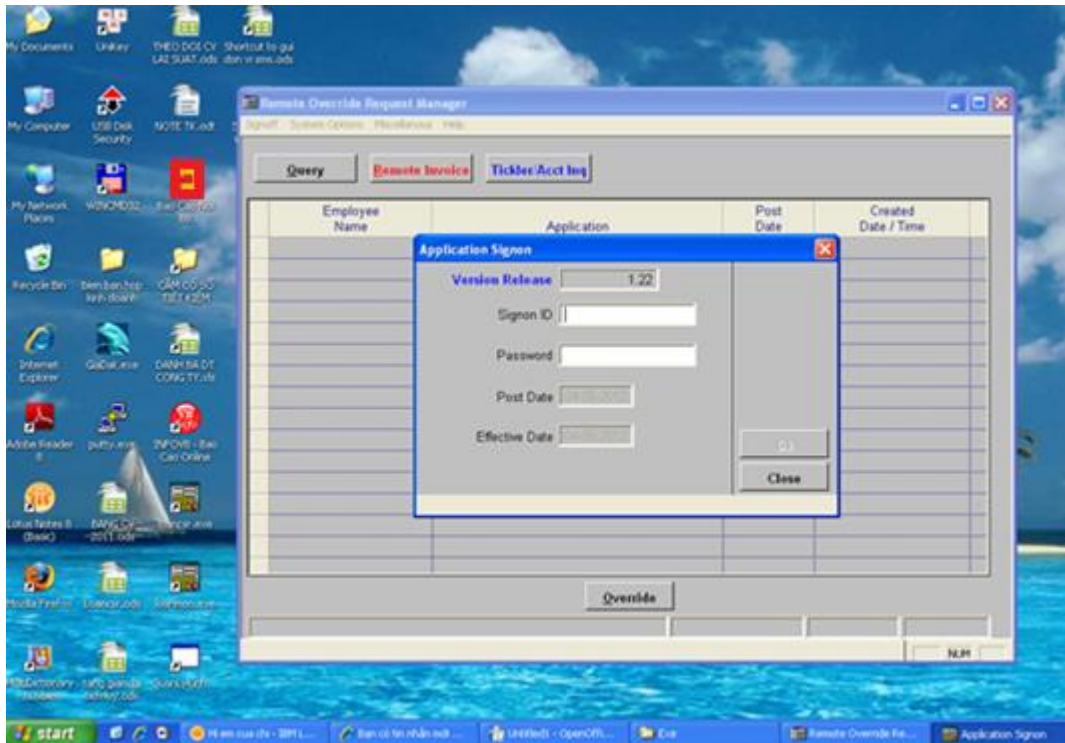
- (Eds.) *Handbook of organizational change and innovation*, Oxford University Press: New York, pp. 259-303.
- Van de Ven, A. H. & Poole, M. S. (1995) "Explaining development and change in organisations", *Academy of Management Review*, 20(3), pp. 510-40.
- Van de Ven, A. H., & Sun, K. (2011) "Breakdowns in implementing models of organization change", *The Academy of Management Perspectives*, 25(3), pp. 58-74.
- Van Der Vegt, G. & Bunderson, J. S. (2005) "Learning and performance in multidisciplinary teams: The importance of collective team identification", *Academy of Management Journal*, 48(3), pp.532–55.
- Vann, J. L. (2004) "Resistance to change and the language of public organizations: A look at 'clashing grammars' in large-scale information technology projects", *Public Organization Review*, 4(1), pp. 47-73.
- Venkatesh, V., & Bala, H. (2008) "Technology acceptance model 3 and a research agenda on interventions", *Decision Sciences*, 39(2), pp. 273–315.
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. (2003) "User acceptance of information technology: Toward a unified view", *MIS Quarterly*, 27(3), pp. 425-78.
- Vidgen, R. & Braa, K. (1997) "Balancing interpretation and intervention in information system research: the action case approach", in Lee, A. S., Liebenau, J. & DeGross, J. I. (Eds.) *Information systems and qualitative research*, Chapman & Hall: London, pp. 524-41.
- Volberda, H. W. & Lewin, A. Y. (2003) "Co-evolutionary dynamics within and between firms: From evolution to co-evolution", *Journal of Management Studies*, 40(8), pp. 2111-36.
- Von Bertalanffy, L. (1968) *General systems theory*, Braziller: New York.
- Waddell, D. M.; Cummings, T. G. & Worley, C. G. (2011) *Organisational change: Development and transformation*, 4<sup>th</sup> edn., Cengage Learning Australia Pty Limited: Melbourne.
- Waddington, D. (2004) "Participant observation", in Cassel, C. & Symon, G. (Eds.) *Essential guide to qualitative methods in organizational research*, Sage Publications: London, pp. 154-64.

- Wagner, E. L. & Newell, S. (2007) "Exploring the importance of participation in the post-implementation period of an ES project: A neglected area", *Journal of the Association for Information Systems*, 8(10), pp. 508-24.
- Walden, E. A. & Hoffman, J. J. (2007) "Organizational form, incentives and the management of information technology: Opening the black box of outsourcing", *Computers & Operations Research*, 34(12), pp. 3575-91.
- Walsham, G. (1995) "The emergence of interpretivism in IS research", *Information Systems Research*, 6(4), pp. 376-94.
- Walsham, G. (2006) "Doing interpretive research", *European Journal of Information Systems*, 15(3), pp. 320-30.
- Wang, K.Y. & Clegg, S. (2002) "Trust and decision making: Are managers different in the People's Republic of China and in Australia", *Cross Cultural Management*, 9(1), pp. 30-45.
- Watkins, J. W. (1968) "Methodological individualism and social tendencies", in Brodbeck, M. & Brodbeck, M. (Eds.) *Readings in the Philosophy of the Social Sciences*, Macmillan: New York, pp. 269-80.
- Weick, K. E. (1995) *Sense-making in organisations*, Sage Publications: Thousand Oaks, CA.
- Weick, K. E., Sutcliffe, K. M. & Obstfeld, D. (2005) "Organising and the process of sensemaking", *Organization Science*, 16(4), pp. 409-21.
- Weisbord, M. R. (1976) "Organizational diagnosis: Six places to look for trouble with or without a theory", *Group & Organization Management*, 1(4), pp. 430-47.
- Whisler, T. (1970) *The impact of computers on organisations*, Praeger: New York.
- Willcocks, L., Whitley, E. A. & Avgerou, C. (2008) 'The ranking of top IS journals: A perspective from the London School of Economics', *European Journal of Information Systems*, 17(6), pp. 163-8.
- Williams, J., Williams, M. D. & Morgan, A. (2013) "A teleological process theory for managing ERP implementations", *Journal of Enterprise Information Management*, 26(3), pp. 235-49.
- Williams, M. D., Dwivedi, Y. K., Lal, B. & Schwarz, A. (2009) "Contemporary trends and issues in IT adoption and diffusion research", *Journal of Information Technology*, 24(1), pp. 1-10.



- Woodward, J. (1965) *Industrial Organization: Theory and Practice*, Oxford University Press: London.
- Woodward, S. & Hendry, C. (2004) "Leading and coping with change", *Journal of Change Management*, 4(2), pp. 155-83.
- Yin, R. K. (2009) *Case study research: Design and methods*, 4<sup>th</sup> edn., Sage Publications: London.
- Yoon, S. & Kuchinke K. P. (2005) "Systems theory and technology. Lenses to analyze an organization", *Performance Improvement*, 44(4), pp.15-20.
- Yousafzai, S. Y., Foxall, G. R. & Pallister, J. G. (2010) "Explaining internet banking behaviour: Theory of reasoned action, theory of planned behaviour, or technology acceptance model?", *Journal of Applied Social Psychology*, 40(5), pp. 1172-202.
- Yurdusev, A. N. (2012) "The Impact of Information Revolution on the Levels and Units of Analysis", in *the 9<sup>th</sup> CONTECSI-International Conference on Information Systems and Technology Management*, Sao Paulo, Brazil, pp. 118-29.
- Zhu, K. & Kraemer, K. L. (2005) "Post-adoption variations in usage and value of e-business by organizations: Cross-country evidence from the retail industry", *Information Systems Research*, 16(1), pp. 61–84.
- Zhu, W., May, D. R. & Avolio, B. J. (2004) "The impact of ethical leadership behaviour on employee outcomes: The roles of psychological empowerment and authenticity", *Journal of Leadership & Organizational Studies*, 11(1), pp.16-26.
- Zuber-Skerritt, O. & Perry, C. (2002) "Action research within organizations and university thesis writing", *The Learning Organization*, 9(4), pp. 171–9.

## Appendix A: The current version of CBS at AlphaBank



## **Appendix B: Copy of letter to the case organization**

### **English version**

London Metropolitan Business School  
84 Moorgate  
London  
EC2M 6SQ

To whom it may concern,

This letter is to support Le Nguyen Hoang's application to conduct research within your organisation. Le Nguyen Hoang is now on the second stage of his Doctor of Business Administration degree and at this stage, it is expected that candidates must have access to an organisation with an area of responsibility where they would carry out their research inquiry in accordance with the Programme requirements and guidelines.

Perhaps, you may want an issue or a challenge that you are currently facing looked into in order for you to use real research as a vehicle for policy and decision making. Please do not hesitate to contact me if you require further information regarding this enquiry.

Yours sincerely,

Dr Jane Neal-Smith

Doctor of Business Administration Course Leader

London Metropolitan Business School

[s.neal-smith@londonmet.ac.uk](mailto:s.neal-smith@londonmet.ac.uk)

0207 3201687

## **Appendix C: Letter of agreement**

### **English version**

#### **Organisation participating in the inquiry**

AlphaBank  
123 ABC St.  
XYZ City, Vietnam  
Tel: (+84) xx xxxxxxxx  
Fax: (+84) xx xxxxxxxx  
Email: [alphabank@alphabank.com.vn](mailto:alphabank@alphabank.com.vn)

#### **LMBS - DBA Student**

Le Nguyen Hoang  
Tel: (+44) 7904530650  
E-mail: [nhl0013@londonmet.ac.uk](mailto:nhl0013@londonmet.ac.uk)

#### **Research description and action steps**

The research objectives, process, and potential outcomes are described in the research proposal which is enclosed with this letter. The research proposal highlights the activities to be completed and the involvement of the organisation and its employees.

#### **Student's role and responsibilities**

During the research process, the student will play a role as an external researcher and work in a collaborative manner with the upgrading project team. His final report can be used by the organisation as a source of recommendations about the solution to its problems. Any significant change made during the research process that is not in line with the research proposal must be notified to the organisation's top management.

### **Organisation commitment**

The organisation agrees to allow the student to access to individuals and groups who are essential to the completion of the research, use collected data and relevant documents only for research purposes and with a promise of confidentiality.

### **Confidentiality**

The student agrees to honour individual and organisational confidentiality and non-disclosure guidelines. All participants will be asked to acknowledge that the information they provide will be managed in a confidential and privileged manner, as described in the LMBS Ethics Policy, accessible at:

<http://www.londonmet.ac.uk/research/the-research-and-postgraduate-office/current-students/research-ethics.cfm>

### **Delivery**

The student will provide the organisation with a copy of the thesis final report.

### **Endorsement**

We the undersigned agree to abide by the arrangements and statements contained in this letter of agreement:

---

Chief Executive Officer

---

IT Department Director

---

Student

## **Vietnamese version**

### **Tổ chức liên quan:**

AlphaBank  
123 ABC St.  
XYZ City, Vietnam  
Tel: (+84) xx xxxxxxxx  
Fax: (+84) xx xxxxxxxx  
Email: alphabank@alphabank.com.vn

### **LMBS – Sinh viên DBA**

Lê Nguyên Hoàng  
Tel: (+44) 7904530650  
E-mail: nhl0013@londonmet.ac.uk

### **Mô tả các bước đề tài nghiên cứu**

Mục đích nghiên cứu, quy trình, và kết quả tiềm năng được mô tả trong đề cương nghiên cứu được kèm theo thư này. Đề tài cũng khái quát các bước cần thực hiện và sự liên quan của thành viên của tổ chức liên quan.

### **Vai trò và trách nhiệm của sinh viên**

Trong quá trình nghiên cứu, sinh viên sẽ đóng vai trò như một nhà nghiên cứu bên ngoài tổ chức. Báo cáo cuối cùng của sinh viên có thể được sử dụng bởi tổ chức như một nguồn kiến nghị về giải pháp cho vấn đề của tổ chức. Bất kỳ thay đổi đáng kể được thực hiện trong quá trình nghiên cứu không phù hợp với đề cương nghiên cứu phải được thông báo cho cấp quản lý của tổ chức.

### **Cam kết bên phía tổ chức**

Tổ chức đồng ý cho phép sinh viên tiếp cận với các cá nhân và nhóm người cần thiết để hoàn thành việc nghiên cứu, sử dụng dữ liệu thu thập được và các tài liệu có liên quan hoàn toàn cho mục đích nghiên cứu và với lời hứa sẽ giữ bí mật.

**Bảo mật**

Sinh viên đồng ý bảo mật các thông tin thu thập được từ các thành viên cũng như tổ chức. Tất cả người tham gia sẽ được giải thích về cách mà sinh viên sẽ bảo mật các thông tin mà họ cung cấp, như được mô tả trong chính sách đạo đức của LMBS, truy cập tại:

<http://www.londonmet.ac.uk/research/the-research-and-postgraduate-office/current-students/research-ethics.cfm>

**Khi hoàn tất nghiên cứu**

Sinh viên sẽ cung cấp cho tổ chức một bản sao của báo cáo cuối cùng của luận án.

**Thỏa thuận**

Chúng tôi ký tên dưới đây đồng ý tuân theo nội dung đề ra trong lá thư này:

---

Tổng giám đốc

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Trưởng phòng CNTT

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Sinh viên

## **Appendix D: Interview consent form**

### **English version**

I, Le Nguyen Hoang, am a doctoral student in Business Administration. Currently, I am conducting a research about managing resistance to IS change and it will be an integral part of my doctoral programme requirements. The purpose of the interview is to investigate the problems or issues associated with the core banking system project and improve the existing management activities in your organisation. Therefore, I am requesting your permission to interview you about your opinion about the project. The interview should take you no more than 1 hour and your responses will remain completely confidential, which means that:

- The report from this interview to other people will be anonymous and any response you made will not be traced back to you personally.
- Neither you nor the name of the organisation will be identified by the name in the final thesis.

I would be happy to answer any questions you have before you agree to be interviewed. You also can keep one copy of this letter if you wish. In case you need more information about this study, you can contact one of my supervisors:

1/ Dr. Humphrey Shaw, email: [humphreyshaw@gmail.com](mailto:humphreyshaw@gmail.com)

2/ Dr. Wendy Bloisi, email: [w.bloisi@londonmet.ac.uk](mailto:w.bloisi@londonmet.ac.uk)

3/ Dr. Robert Carty, email: [r.carty@londonmet.ac.uk](mailto:r.carty@londonmet.ac.uk)

Sincerely thank for your time and consideration. If you wish to take part in the study, please sign below.

---

|         |             |      |
|---------|-------------|------|
| Student | Interviewee | Date |
|---------|-------------|------|



## **Vietnamese version**

Tôi tên là Lê Nguyên Hoàng và hiện đang là sinh viên tiến sĩ về quản trị kinh doanh. Hiện nay tôi đang tiến hành một nghiên cứu về quản lý những rào cản trong việc thay thế hệ thống ngân hàng lỗi. Mục đích của cuộc phỏng vấn này nhằm để hỗ trợ một phần trong việc thúc đẩy dự án nâng cấp cũng như cải tiến các hoạt động quản lý hiện tại ở tổ chức của anh/chị. Do đó, tôi xin phép được sự đồng ý của anh/chị để phỏng vấn một số vấn đề liên quan đến dự án. Cuộc phỏng vấn này sẽ kéo dài không quá 1 tiếng đồng hồ và câu trả lời của anh/chị sẽ được bảo mật hoàn toàn, điều đó có nghĩa là:

- Báo cáo từ cuộc phỏng vấn này cho những người khác sẽ được thay đổi danh tính và bất kỳ thông tin anh/chị cung cấp sẽ không bị truy sét lại cá nhân anh/chị.
- Tên của anh/chị và tên của tổ chức sẽ được thay thế bằng tên mật danh và không thể xác định được trong bài báo cáo luận văn tốt nghiệp.

Tôi rất vui lòng được trả lời nếu anh/chị có bất kỳ thắc mắc nào trước khi đồng ý được phỏng vấn. Anh/chị cũng có thể giữ 1 bản sao của lá thư này nếu anh/chị muốn. Trong trường hợp anh/chị cần thêm thông tin về nghiên cứu này, anh/chị có thể liên hệ một trong những giáo viên hướng dẫn của tôi:

1/ Tiến sĩ Humphrey Shaw, email: [humphreyshaw@gmail.com](mailto:humphreyshaw@gmail.com)

2/ Tiến sĩ Wendy Bloisi, email: [w.bloisi@londonmet.ac.uk](mailto:w.bloisi@londonmet.ac.uk)

3/ Tiến sĩ Robert Carty, email: [r.carty@londonmet.ac.uk](mailto:r.carty@londonmet.ac.uk)

Chân thành cảm ơn vì anh/chị đã dành thời gian và sự quan tâm. Nếu anh/chị đồng ý tham gia nghiên cứu đề cập ở trên, xin vui lòng ký tên ở bên dưới.

---

Sinh viên

Người tham gia phỏng vấn

Ngày tháng

**Appendix E: Letter of agreement on non-disclosure and confidentiality (with the secondary data analyst)**

By signing below you agree that all information you received concerning the organisation under investigation will be kept as confidential and will not be disclosed to other persons. The information shall be returned to the organisation promptly at its request with all copies made thereof.

---

The secondary analyst's  
signature

---

Date

## **Appendix F: Interview guide used at the diagnosing phase**

### **English Version**

#### **Opening:**

I, Le Nguyen Hoang, am a doctoral student in Business Administration. Currently, I am conducting a research about managing resistance to IS change and it will be an integral part of my doctoral programme requirements. Therefore, your opinion would be very useful for me in order to develop the existing knowledge on this subject. The interview should take you no more than 1 hour and your responses will remain completely confidential, which means that:

- The report from this interview to other people will be anonymous and any response you made will not be traced back to you personally.
- Neither you nor the name of the organisation will be identified by the name in the final thesis.

#### **Interview questions:**

(Remark: Because the exploratory nature of the diagnosis, many additional questions could be asked if needed)

#### **1. Background information**

- 1.1. How many years have you been with the organisation?
- 1.2. How many years have you been in this industry?
- 1.3. What is your position in the organisation?
- 1.4. What are your responsibilities?
- 1.5. How is the current CBS used for, or how does it involve, your area of responsibilities?

#### **2. Investigating external environment leading to resistance to change (*used for managerial positions*)**

- 2.1. What, in your opinion, are the key external problems (i.e., political, economic, social, technological) that the organisation is currently facing that has led to the postponement in the CBS upgrading project?

### **3. Investigating resistance to change at the organisational level (*used for managerial positions*)**

- 3.1.** Would you please describe the purposes of the upgrading project?
- 3.2.** How is the upgrading project aligned with the organisational strategy plan?
- 3.3.** What is the project's scope?
- 3.4.** How does the project's scope affect your perception toward the upgrading project?
- 3.5.** What do you think about the measurement for the outcomes of the project? Is the measurement clear and specific to avoid any misinterpretation of the outcomes?
- 3.6.** What do you think about the manner in which activities or steps for the project were planned?
- 3.7.** What do you think about the estimated timelines for the project? Do you think the CBS change project like this one usually takes longer or shorter than expected? Why?
- 3.8.** What do you think about the organisational reward system, especially for this project?
- 3.9.** What do you think about the requirements of physical and human resources for the project?
- 3.10.** What has the organisation done so far to create buy-in and support for the project? (e.g., openness to discuss the problems, power allocated to the project team, formal training)
- 3.11.** What has the organisation done to involve its staff in making decision on the project?
- 3.12.** How has the CBS upgrading project been communicated to those who were not involved the decision making process?
- 3.13.** What was the form of the communication? What do you think about that communication form?
- 3.14.** What level of consensus was there within the top management about the upgrading project? Could you please give any reason for your answer?
- 3.15.** Who is the champion or the leader of the upgrading project? Was he/she volunteered or appointed? Has he/she got any previous experience for the CBS change? How has he/she been trained for this role?

**4. Investigating resistance to change at the group level (*used for managerial positions*)**

- 4.1. Has your department/branch been affected by the upgrading project? If yes, which group of people was affected?
- 4.2. How and why were they affected?

**5. Investigating resistance to change at the individual level (*used for operational staff*)**

- 5.1. What are the benefits you have experienced since using or interacting with the current CBS?
  - What is your opinion about its usefulness?
  - What is your opinion about its ease of use?
- 5.2. Are you satisfied with the current CBS or would you like to have it changed? How does this answer affect your perception toward the CBS upgrading project?
- 5.3. In your opinion, what will you gain because of the new CBS implementation?
- 5.4. What will you lose because of the new CBS implementation?
- 5.5. What were your major concerns, the gains or the losses, when forming your perception toward the CBS upgrading project?
- 5.6. Have you been kept sufficiently informed about the CBS upgrading project by the top management?
  - If no, why not?
  - If yes, what do you think about the way it has been communicated?
- 5.7. How have other people (e.g., your colleague) at your workplace affected your perception toward the CBS upgrading project?
- 5.8. In overall, do you hold a favourable or unfavourable attitude toward the CBS upgrading project?

**Closing:**

- Ask for any additional comment that the interviewee feels has been unsaid.
- Ask for any advice on lessons learned from the change process.

- Ask for suggestion for future appropriate interviewees (*used for managerial positions*).
- Thank the interviewee for his/her participation.

## **Vietnamese Version**

### **Mở đầu:**

Em tên là Lê Nguyễn Hoàng hiện đang là sinh viên tiến sĩ quản trị kinh doanh. Hiện nay, em đang tiến hành một nghiên cứu về quản lý những rào cản trong việc thay thế hệ thống ngân hàng lỗi. Vì vậy, ý kiến của anh/chị sẽ rất hữu ích cho em để phát triển các kiến thức hiện có về chủ đề này. Cuộc phỏng vấn sẽ kéo dài không quá 1 giờ và câu trả lời của anh/chị sẽ được bảo mật hoàn toàn, điều đó có nghĩa là:

- Báo cáo từ cuộc phỏng vấn này cho những người khác sẽ được thay đổi danh tính và bất kỳ thông tin anh/chị cung cấp sẽ không bị truy vết lại cá nhân anh/chị.
- Tên của anh/chị và tên của tổ chức sẽ được thay thế bằng tên mật danh và không thể xác định được trong bài báo cáo luận văn tốt nghiệp.

### **Câu hỏi phỏng vấn:**

(Ghi chú: Vì tính chất thăm dò để đào sâu, nhiều câu hỏi bổ sung có thể được yêu cầu nếu cần thiết)

#### **1. Thông tin cơ bản**

- 1.1.** Anh/chị có thể cho biết anh/chị đã làm việc bao nhiêu năm cho tổ chức này?
- 1.2.** Anh/chị đã làm việc bao nhiêu năm trong lĩnh vực này?
- 1.3.** Vị trí của anh/chị trong tổ chức là gì?
- 1.4.** Trách nhiệm hay công việc của anh/chị là gì?
- 1.5.** Hệ thống ngân hàng lỗi hiện nay hỗ trợ hay liên quan đến công việc của anh/chị như thế nào?

## **2. Câu hỏi liên quan đến tác động từ phía môi trường bên ngoài (được sử dụng cho các vị trí quản lý)**

**2.1.** Điều gì, theo ý kiến của anh/chị, là những vấn đề bên ngoài (ví dụ, chính trị, kinh tế, xã hội, công nghệ) mà tổ chức hiện đang phải đối mặt dẫn đến sự trì hoãn trong dự án nâng cấp hệ thống ngân hàng lõi?

## **3. Câu hỏi tham khảo ở cấp tổ chức (được sử dụng cho các vị trí quản lý)**

**3.1.** Anh/chị có thể cho biết mục tiêu của dự án nâng cấp hệ thống lõi trước đây là gì?

**3.2.** Làm thế nào để dự án nâng cấp hệ thống lõi phù hợp với kế hoạch chiến lược của tổ chức?

**3.3.** Anh/chị có thể cho biết phạm vi hay quy mô của dự án là gì?

**3.4.** Phạm vi hay quy mô của dự án ảnh hưởng đến nhận thức của anh/chị về dự án nâng cấp như thế nào?

**3.5.** Anh/chị nghĩ gì cách đo lường đối với các kết quả của dự án? Các đo lường này có đủ rõ ràng và cụ thể để tránh bất kỳ sai lệch về kết quả của dự án?

**3.6.** Anh/chị nghĩ gì về cách lên kế hoạch các bước cần triển khai của dự án?

**3.7.** Anh/chị nghĩ gì về các mốc thời gian dự kiến cho dự án? Anh/chị có nghĩ rằng dự án thay đổi hệ thống lõi như thế này thường mất nhiều thời gian hơn hoặc ngắn hơn so với dự kiến? Tại sao?

**3.8.** Anh/chị nghĩ gì về hệ thống khen thưởng của tổ chức, đặc biệt đối với dự án này?

**3.9.** Anh/chị nghĩ gì về các yêu cầu về nguồn lực tài chính và nhân lực cho dự án?

**3.10.** Những hỗ trợ nào mà tổ chức đã thực hiện cho đến nay để thúc đẩy dự án này? (Ví dụ, sự cởi mở để thảo luận về các vấn đề, quyền lực được phân bổ cho các thành viên dự án, đào tạo v.v.)

**3.11.** Điều gì mà tổ chức đã thực hiện để thông báo cũng như thăm dò ý kiến của các nhân viên liên quan trong việc đưa ra các quyết định về dự án?

**3.12.** Bằng cách nào dự án nâng cấp hệ thống ngân hàng lõi được truyền đạt đến những người không liên quan đến việc ra quyết định?

**3.13.** Hình thức phổ biến hay truyền thông các vấn đề liên quan đến dự án là gì? Anh/chị nghĩ gì về hình thức thông tin liên lạc trên?

**3.14.** Mức độ đồng thuận trong việc ra quyết định của các cấp quản lý về dự án nâng cấp như thế nào? Anh/chị có thể giải thích cụ thể cho câu trả lời trên?

**3.15.** Anh/chị có thể cho biết ai là người lãnh đạo của dự án nâng cấp? Người lãnh đạo ấy tình nguyện hay được bổ nhiệm cho vị trí đó? Người lãnh đạo ấy có bất kỳ kinh nghiệm hay được đào tạo trước đây cho việc thay đổi hệ thống lõi hay không?

#### **4. Câu hỏi ở cấp độ nhóm (được sử dụng cho các vị trí quản lý)**

**4.1.** Bộ phận/chi nhánh của anh/chị có bị ảnh hưởng bởi dự án nâng cấp? Nếu có, ai là nhóm người bị ảnh hưởng?

**4.2.** Tại sao họ bị ảnh hưởng và bị ảnh hưởng như thế nào?

#### **5. Câu hỏi ở cấp độ cá nhân (sử dụng cho nhân viên)**

**5.1.** Anh/chị suy nghĩ gì về hệ thống ngân hàng lõi hiện tại?

- Về tính hữu dụng của hệ thống ngân hàng lõi hiện tại?
- Về tính dễ sử dụng của hệ thống ngân hàng lõi hiện tại?

**5.2.** Anh/chị có hài lòng với hệ thống ngân hàng lõi hiện tại hoặc muốn có sự thay đổi? Câu trả lời này ảnh hưởng như thế nào đến nhận thức của anh/chị về dự án nâng cấp hệ thống ngân hàng lõi?

**5.3.** Theo ý kiến của anh/chị, những gì anh/chị sẽ đạt được nếu hệ thống ngân hàng lõi được thay thế?

**5.4.** Những gì anh/chị sẽ mất bởi vì việc thay thế hệ thống ngân hàng lõi?

**5.5.** Mối quan tâm lớn nhất của anh/chị là lợi ích hay thiệt hại, khi hình thành nhận thức của anh/chị về dự án nâng cấp hệ thống ngân hàng lõi?

**5.6.** Anh/chị có được thông báo hay cung cấp thông tin đầy đủ về dự án nâng cấp hệ thống ngân hàng lõi từ ban lãnh đạo?

- Nếu không, tại sao không?
- Nếu có, anh/chị suy nghĩ gì về cách nó đã được truyền đạt hay thông báo?

**5.7.** Các người khác (ví dụ, đồng nghiệp của anh/chị) tại nơi làm việc có ảnh hưởng như thế nào đến nhận thức của anh/chị đối với dự án nâng cấp hệ thống ngân hàng lõi?

**5.8.** Nhìn chung, anh/chị có quan điểm tán thành hay không tán thành dự án nâng cấp hệ thống ngân hàng lõi?



**Kết thúc phỏng vấn:**

- Anh/chị có muốn bình luận thêm những vấn đề liên quan khác mà không có trong câu hỏi.
- Anh/chị có những lời khuyên hay kiến nghị nào về dự án nâng cấp hệ thống ngân hàng lõi.
- Anh/chị có thể giới thiệu những thành viên khác trong bộ phận/chi nhánh mình cho việc phỏng vấn. (sử dụng cho các vị trí quản lý).
- Cảm ơn anh/chị vì đã tham gia phỏng vấn.

## **Appendix G: Interview guide used at the evaluation phase**

### **English Version**

- 1) What activities have been done since our work shop?
- 2) How and why did those activities come about?
- 3) What are the aims of those activities?
- 4) Were those activities taken according to the strategy sheet or emerged from the resistance management process?
- 5) What results of those activities were your particular concerns?
  - 5.1) What helped the bank's staff to commit to the CBS change project? Why?
  - 5.2) What stopped the bank's staff for doing so? Why?
  - 5.3) Can you give some physical evidence to support your above assessments?
- 6) What, in your opinion, are the areas of requiring improvement (both in terms of the strategy sheet and the resistance management process)? Why?
- 7) Would you like to make any additional comment?

Thank you very much for your participation.

## **Vietnamese Version**

- 1) Những hoạt động nào đã được thực hiện kể từ sau khi buổi hội thảo?
- 2) Tại sao những hoạt động đó được triển khai và triển khai như thế nào?
- 3) Mục tiêu của những hoạt động đó là gì?
- 4) Những hoạt động đó được thực hiện theo bảng chiến lược đã đề xuất hay xuất phát trong quá trình thực hiện?
- 5) Những kết quả nào của các hoạt động đó mà anh quan tâm?
  - 5.1) Điều gì đã khiến các nhân viên trong ngân hàng trở nên đồng tình với dự án?  
Tại sao?
  - 5.2) Điều gì đã khiến họ vẫn tiếp tục không đồng tình? Tại sao?
  - 5.3) Anh có thể đưa ra một số bằng chứng cụ thể để hỗ trợ đánh giá trên của anh?
- 6) Điều gì, theo ý kiến của anh, là những lĩnh vực cần cải thiện (cả về bảng chiến lược và quá trình quản lý việc không đồng tình của nhân viên)? Tại sao?
- 7) Anh có muốn bình luận thêm những vấn đề liên quan khác mà không được hỏi?

Cảm ơn anh rất nhiều vì đã tham gia phỏng vấn.

## Appendix H: Codebook at the diagnosing phase

| Description   | Code                    | Example for coding   |
|---|-------------------------|--|
| <b>1. <u>Background information</u></b>   | <b>Background Info.</b> |  |
| 1.1. Years of experience in the organisation  | EXP-Organisation        | “I started to work for the Alphabank in 2008. It has been 5 years since then.”   |
| 1.2. Years of experience in the banking industry  | EXP-Banking             | “I have been working in this industry since 2006. It’s nearly 10 years. 4 years at another bank and 6 years at the Alphabank.”   |
| 1.3. Position in the organisation   | Position                | “At the moment I am working as a core banking system administrator.”   |
| 1.4. Responsibilities in the organisation   | Responsibilities        | “I’m responsible for managing and keeping the CBS running smoothly. It includes managing the database, the application server and the clients. It means that I have to frequently check the whole system to examine whether there is any problem and, if yes, where the problem occurs.” |
| 1.5. The extent in which the current CBS is used for or involves the participant’s area of responsibilities | Responsibilities -CBS   | “Except for creating word documents, most of my work is done on the CBS, such as money deposit and withdrawal, fund transfer, or even tracking information about customers to provide them with account consultation...The system also provides me with interest calculations.”          |

| <b><u>2. External environment leading to resistance to change</u></b> | <b>External Environment</b> |   |
|---|-----------------------------|---|
| 2.1. Political factors  | ENV-Politic                 | <p>“The unstable political system does somewhat affect the project. In particular, the real estate law has been changed so much by the government since last year and, therefore, many SMEs (Small and Medium Enterprises) owe tax arrears of hundreds of billions dong. What is the next consequence? Many banks are facing bad debts which cannot be recovered...So it is necessary to reconsider our business strategic plan at this time.”</p>      |
| 2.2. Economic factors   | ENV-Economic                | <p>“The economic situation is going down so we need to be conservative to be suitable with the current situation...Hence, instead of investing on the system, cutting costs but still maintaining its features and the bank’s requirements are our priorities.”</p>   |
| 2.3. Technological factors  | ENV-Technological           | <p>“5 years ago if the system did not meet the requirements for new features or new products, the replacement or upgrade would be inevitable. However, in recent years, by adding a middleware to implement new features that the current system cannot do, most banks then choose this solution because the CBS replacement project is often expensive and time-consuming than expected. However, in my opinion, it is just a temporary solution.”</p> |

| <b><u>3. Organisational parameters leading to resistance to change</u></b>                  | <b>Organisational factors</b> |  |
|---|-------------------------------|--|
| 3.1. Misalignment between the purposes of the project and the organisational strategic plan | Misalignment-Purposes         | “Investing on the CBS upgrading project was completely aligned with the bank’s strategic plan. But it is no longer aligned at the moment. I agree with the IT Department Director that the project should be viewed as a long-term investment. Yet, it must be noted that the bank’s capital structure is mainly formed by short-term deposits. So we can’t make a decision about it without considering the current predicament faced by the bank.” |
| 3.2. Problems caused by the project’s scope   | Problems-Scope                | “A large-scale project like this one is often associated with high risk. Imagining that the bank is like a moving car, the replacement of its engine when it is running is not easily at all. Although the CBS replacement can be preceded in a piecemeal manner to minimise the damage to the bank’s operations, its impact is obvious and inevitable.”   |
| 3.3. Problems with activities or steps for the system implementation                        | Problems-Steps                | “Since we have little experience of upgrading the CBS, the implementation steps could be seen as not specific and they are just the initial steps of the project. The detailed guidelines and specific assignments are dependent on the chosen vendor.”  |

|   |                     |   |
|---|---------------------|---|
| 3.4. Problems with the timelines of the project         | Problems-Timelines  | “In reality the project like this often lasts longer than expected. First, the implementation process will certainly generate more requests. And it will take time to solve all the requests. Second, changes in personnel during the prolonged project will be unavoidable. If they are members of the project team, the new members will need time to catch up with the project.” |
| 3.5. Lack of physical resources                         | Lack-P.Resources    | “The initial license cost for the new CBS could be few hundred thousand dollars, regardless of equipment cost and other costs incurred.”  |
| 3.6. Lack of human resources                            | Lack-H.Resources    | “At the moment, we do have a team with at least three year experience. But it is the experience for operating the system, not for solving complex problems of the system replacement.”  |
| 3.7. Problems for measuring the outcomes of the project | Problems-Outcomes   | “The technical members believe that the outcomes should be measured based on applied aspects of the new system while others [business-oriented members] are more concerned about its return on the investment.”   |
| 3.8. Leadership problems                                | Problems-Leadership | “The project requires the participation of many departments, not just IT department. But we do not have a vice president who is specialised on IT.”   |
| 3.9. Problems from the organisational reward system     | Problems-Reward     | “Because the project is at the early stage, we do not have specific policies for rewarding staff involved the project. Only extra paid for working overtime.”   |
| 3.10. Lack of organisational supports                   | Lack-Supports       |   |

|  |                              |  |
|--|------------------------------|--|
| 3.10.1. Not openness to discuss the problems           | Lack-Supports-Discussion     | “If there is any problem occurred, the project team members are self-motivated to contact others by phone or email, or arrange for a direct meeting, if needed.”                                   |
| 3.10.2. Lack of formal training                        | Lack-Supports-Training       | “The chosen vendor will provide training for the project team if we decide to sign the contract. Besides that, we are self-learning by doing and evaluating things.”                               |
| 3.11. Lack of users’ involvement                       | Lack-Involvement             | “Staff who are not involved the project will receive the notification if the new system is deployed and put into operation only.”  |
| 3.12. Problems from the communication                  | Problems-Communication       | “Communication across departments does exist but I think it is not effective because we [IT staff and business-oriented staff] do not speak the same language [different professional expertise].” |
| 3.13. Lack of a sense of urgency                       | Lack-Urgency                 | “There is a feasible solution to the old system so the upgrade is not really necessary at the present.”  |
| <b><u>4. Reasons for group to resist to change</u></b> | <b>Group factors</b>         |  |
| 4.1. Conflict of interests                             | Conflict-Interests           |  |
| 4.1.1. Redistribution of power                         | Conflict-Interests-Power     | “Most modern CBSs have a feature for cross-managing and controlling to enhance the bank’s internal security.”  |
| 4.1.2. Reallocation of resources                       | Conflict-Interests-Resources | “...Existing modules integrated in the current CBS we have built so far will be probably lost or changed. If the new CBS can provide such functions or features, then it is okay for me.”          |



|   |                                |   |
|---|--------------------------------|---|
| 4.1.3. Increase in the group's workload   | Conflict-Interests-Workload    | "It takes approximately 2 weeks for training the business-oriented staff. But the IT staff must spend at least 2 years for training, understanding, and implementing the new system." |
| <b><u>5. Reasons for individual to resist to change</u></b>                                 | <b>Individual factors</b>      |   |
| 5.1. Rational resistance  | Rational                       |   |
| 5.1.1. Satisfaction with the current CBS  | Rational-CBS                   |   |
| 5.1.1.1. The usefulness of the current CBS  | Rational-CBS-Usefulness        | "I think even though it is an old technology, it still meets our customers' requirements. So why do we have to make it changed?"  |
| 5.1.1.2. The ease of use of the current CBS   | Rational-CBS-EOU               | "It is not sophisticated and easy to remember [its functions] as compared to other systems I have known."   |
| 5.1.2. Greater costs than benefits brought by the new system                                | Rational-NewCBS                |   |
| 5.1.2.1. Low relative benefits for changing to the new system                               | Rational-NewCBS-L.Benefits     | "Though it [the current CBS] is old, most of new features or functions can be integrated on it via middle layers."  |
| 5.1.2.2. High relative costs (i.e., time, money and efforts) for changing to the new system | Rational-NewCBS-H.Costs        | "I do not know how beneficial it [the new CBS] is. But it is for sure that I have to spend a lot of time and effort for learning the new system."                                     |
| 5.1.3. Effects from social pressure (e.g., friends, colleagues) against the project         | Rational-NewCBS-SocialPressure | "We have conversations sometimes and he [the participant's colleague] complains that there are so many things for programming."   |

|  |                             |   |
|--|-----------------------------|---|
| 5.2. Irrational resistance   | Irrational                  |   |
| 5.2.1. Loss aversion   | Irrational-LossAversion     | “Another bank, which uses the same CBS as ours, is currently upgrading its system. I suppose we should wait to see their results to minimise our risk.”       |
| 5.2.2. Cognitive misperception due to lack of information about the project and/or the proposed system | Irrational-Misperception    | “I haven’t seen or interacted with the new CBS. So, to be honest, I am worried that I have to learn from scratch like a new comer.”                           |
| <b>6. <u>Advice from the participant</u></b>   | <b>Advice</b>               |   |
| 6.1. Needs for training  | Advice-Training             | “Training to enhance our technical skills is very important.”   |
| 6.2. Needs for users’ involvement  | Advice-Involvement          | “It is better for the branch staff like us to have information about the project and its progress so that we are not surprised when the new CBS goes online.” |
| 6.3. Start thinking about some initiatives   | Advice-Initiatives          | “Even though it [the project] is postponed. We need to have some preparation at the moment if it cannot be postponed anymore in 2 or 3 years’ time.”          |
| 6.4. Needs for considering the situation   | Advice-Situation            | “My advice for the future is to upgrade the CBS in line with the bank’s circumstances.”   |
| 6.5. Needs for developing and reinforcing the human resources  | Advice-H.Resources          | “The first and important step is about reinforcing the human resources.”  |
| 6.6. Advice for “phased implementation” instead of “big bang implementation” for reducing risks        | Advice-PhasedImplementation | “I suppose the bank should take the phased deployment approach to minimise the risk of business disruption.”  |

|   |                               |  |
|---|-------------------------------|--|
| 6.7. Advice for a highly trusted project leader who has a wide network within the organisation                                    | Advice-Leadership             | “We need a prestigious project leader who can “sell” the project to the bank’s top management.”  |
| 6.8. Advice for not considering resistance as a barrier but instead as a building block to find the reasons they resist to change | Advice-Resistance             | “It’s a large-scale project so every issue must be carefully considered. Despite the fact that mixed reactions to the project are inevitable, the majority of them are thoughtful with good reasons.”  |
| <b>7. Others</b>  | <b>Others</b>                 |  |
| 7.1. Dependence on the vendor   | Dependence-Vendor             | “The replacement cost [license and equipment] is not the highest but the maintenance cost is. It maybe 3 to 5 times higher. We also have to contact the vendor for every problem occurred. Given these disadvantages, it is important to be proactive with the system and, therefore, the implementation team must include our staff.” |
| 7.2. Drivers for changing the current system (not only the core systems but also the front-end applications)                      | Drivers-change                | “It’s just like Microsoft Windows we are using. If we do not upgrade to a new version, there are some applications which cannot be run due to incompatibility. So is the CBS.”   |
| 7.3. Opportunities for self-development   | Opportunities-SelfDevelopment | “It is an opportunity for me to know another system and develop my knowledge.”   |
| 7.4. Opposite cases which supports the upgrading project  | Opposite-cases                | “Because I believe that new technology is always better.”  |

## Appendix I: Coding agreement at the diagnosing phase

| Node  | Source    | Source Folder | Source Size  | Agreement (%) | A and B (%) | Not A and Not B (%) | Disagreement (%) | A and Not B (%) | B and Not A (%) |
|---|-----------|---------------|--------------|---------------|-------------|---------------------|------------------|-----------------|-----------------|
| Advice  | Phong van | Internals     | 443816 chars | 98.11         | 0           | 98.11               | 1.89             | 1.89            | 0               |
| Advice\Advice-H.Resources                                     | Phong van | Internals     | 443816 chars | 99.91         | 0           | 99.91               | 0.09             | 0.09            | 0               |
| Advice\Advice-Initiatives                                     | Phong van | Internals     | 443816 chars | 99.65         | 0           | 99.65               | 0.35             | 0.35            | 0               |
| Advice\Advice-Involvement                                     | Phong van | Internals     | 443816 chars | 99.64         | 0           | 99.64               | 0.36             | 0.36            | 0               |
| Advice\Advice-Leadership                                      | Phong van | Internals     | 443816 chars | 99.92         | 0           | 99.92               | 0.08             | 0.08            | 0               |
| Advice\Advice-PhasedImplementation                            | Phong van | Internals     | 443816 chars | 99.69         | 0           | 99.69               | 0.31             | 0.31            | 0               |
| Advice\Advice-Resistance                                      | Phong van | Internals     | 443816 chars | 99.95         | 0           | 99.95               | 0.05             | 0.05            | 0               |
| Advice\Advice-Reward  | Phong van | Internals     | 443816 chars | 99.98         | 0           | 99.98               | 0.02             | 0.02            | 0               |
| Advice\Advice-Situation                                       | Phong van | Internals     | 443816 chars | 99.71         | 0           | 99.71               | 0.29             | 0.29            | 0               |
| Advice\Advice-Training  | Phong van | Internals     | 443816 chars | 99.44         | 0           | 99.44               | 0.56             | 0.56            | 0               |
| Background Info.  | Phong van | Internals     | 443816 chars | 94.29         | 0           | 94.29               | 5.71             | 5.71            | 0               |
| Background Info.\EXP-Banking                                  | Phong van | Internals     | 443816 chars | 99.63         | 0           | 99.63               | 0.37             | 0.37            | 0               |
| Background Info.\EXP-Organisation                             | Phong van | Internals     | 443816 chars | 99.79         | 0           | 99.79               | 0.21             | 0.21            | 0               |
| Background Info.\Position                                     | Phong van | Internals     | 443816 chars | 99.73         | 0           | 99.73               | 0.27             | 0.27            | 0               |
| Background Info.\Responsibilities                             | Phong van | Internals     | 443816 chars | 97.7          | 0           | 97.7                | 2.3              | 2.3             | 0               |
| Background Info.\Responsibilities-CBS                         | Phong van | Internals     | 443816 chars | 97.16         | 0           | 97.16               | 2.84             | 2.84            | 0               |
| External environment  | Phong van | Internals     | 443816 chars | 98.93         | 0           | 98.93               | 1.07             | 1.07            | 0               |
| External environment\ENV-Economic                             | Phong van | Internals     | 443816 chars | 99.3          | 0           | 99.3                | 0.7              | 0.7             | 0               |
| External environment\ENV-Politic                              | Phong van | Internals     | 443816 chars | 99.77         | 0           | 99.77               | 0.23             | 0.23            | 0               |
| External environment\ENV-Technological                        | Phong van | Internals     | 443816 chars | 99.86         | 0           | 99.86               | 0.14             | 0.14            | 0               |
| Group factors   | Phong van | Internals     | 443816 chars | 98.9          | 0           | 98.9                | 1.1              | 1.1             | 0               |
| Group factors\Conflict-Interests                              | Phong van | Internals     | 443816 chars | 98.9          | 0           | 98.9                | 1.1              | 1.1             | 0               |
| Group factors\Conflict-Interests\Conflict-Interests-Power     | Phong van | Internals     | 443816 chars | 99.65         | 0           | 99.65               | 0.35             | 0.35            | 0               |
| Group factors\Conflict-Interests\Conflict-Interests-Resources | Phong van | Internals     | 443816 chars | 99.91         | 0           | 99.91               | 0.09             | 0.09            | 0               |
| Group factors\Conflict-Interests\Conflict-Interests-Workload  | Phong van | Internals     | 443816 chars | 99.35         | 0           | 99.35               | 0.65             | 0.65            | 0               |
| Individual factors  | Phong van | Internals     | 443816 chars | 92.76         | 0           | 92.76               | 7.24             | 7.24            | 0               |
| Individual factors\Irrational                                 | Phong van | Internals     | 443816 chars | 98.69         | 0           | 98.69               | 1.31             | 1.31            | 0               |
| Individual factors\Irrational\Irrational-Loss Aversion        | Phong van | Internals     | 443816 chars | 99.38         | 0           | 99.38               | 0.62             | 0.62            | 0               |
| Individual factors\Irrational\Irrational-Misperception        | Phong van | Internals     | 443816 chars | 99.31         | 0           | 99.31               | 0.69             | 0.69            | 0               |
| Individual factors\Rational                                   | Phong van | Internals     | 443816 chars | 94.12         | 0           | 94.12               | 5.88             | 5.88            | 0               |
| Individual factors\Rational\Rational-CBS                      | Phong van | Internals     | 443816 chars | 95.48         | 0           | 95.48               | 4.52             | 4.52            | 0               |

| Node  | Source     | Source Folder | Source Size  | Agreement (%) | A and B (%) | Not A and Not B (%) | Disagreement (%) | A and Not B (%) | B and Not A (%) |
|---|------------|---------------|--------------|---------------|-------------|---------------------|------------------|-----------------|-----------------|
| Individual factors\ Rational\ Rational-CBS\ Rational-CBS-EOU              | Phong van- | Internals     | 443816 chars | 98.51         | 0           | 98.51               | 1.49             | 1.49            | 0               |
| Individual factors\ Rational\ Rational-CBS\ Rational-CBS-Usefulness       | Phong van- | Internals     | 443816 chars | 97.07         | 0           | 97.07               | 2.93             | 2.93            | 0               |
| Individual factors\ Rational\ Rational-NewCBS                             | Phong van- | Internals     | 443816 chars | 98.8          | 0           | 98.8                | 1.2              | 1.2             | 0               |
| Individual factors\ Rational\ Rational-NewCBS\ Rational-NewCBS-H.Costs    | Phong van- | Internals     | 443816 chars | 98.99         | 0           | 98.99               | 1.01             | 1.01            | 0               |
| Individual factors\ Rational\ Rational-NewCBS\ Rational-NewCBS-L.Benefits | Phong van- | Internals     | 443816 chars | 99.77         | 0           | 99.77               | 0.23             | 0.23            | 0               |
| Individual factors\ Rational\ Rational-NewCBS-SocialPressure              | Phong van- | Internals     | 443816 chars | 99.75         | 0           | 99.75               | 0.25             | 0.25            | 0               |
| Organisational factors  | Phong van- | Internals     | 443816 chars | 94.08         | 0           | 94.08               | 5.92             | 5.92            | 0               |
| Organisational factors\ Lack-H.Resources                                  | Phong van- | Internals     | 443816 chars | 99.54         | 0           | 99.54               | 0.46             | 0.46            | 0               |
| Organisational factors\ Lack-Involvement                                  | Phong van- | Internals     | 443816 chars | 99.42         | 0           | 99.42               | 0.58             | 0.58            | 0               |
| Organisational factors\ Lack-P.Resources                                  | Phong van- | Internals     | 443816 chars | 99.74         | 0           | 99.74               | 0.26             | 0.26            | 0               |
| Organisational factors\ Lack-Supports                                     | Phong van- | Internals     | 443816 chars | 99.13         | 0           | 99.13               | 0.87             | 0.87            | 0               |
| Organisational factors\ Lack-Supports\ Lack-Supports-Discussion           | Phong van- | Internals     | 443816 chars | 99.35         | 0           | 99.35               | 0.65             | 0.65            | 0               |
| Organisational factors\ Lack-Supports\ Lack-Supports-Training             | Phong van- | Internals     | 443816 chars | 99.79         | 0           | 99.79               | 0.21             | 0.21            | 0               |
| Organisational factors\ Lack-Urgency                                      | Phong van- | Internals     | 443816 chars | 99.1          | 0           | 99.1                | 0.9              | 0.9             | 0               |
| Organisational factors\ Misalignment-Purposes                             | Phong van- | Internals     | 443816 chars | 99.44         | 0           | 99.44               | 0.56             | 0.56            | 0               |
| Organisational factors\ Problems-Communication                            | Phong van- | Internals     | 443816 chars | 99.76         | 0           | 99.76               | 0.24             | 0.24            | 0               |
| Organisational factors\ Problems-Leadership                               | Phong van- | Internals     | 443816 chars | 99.57         | 0           | 99.57               | 0.43             | 0.43            | 0               |
| Organisational factors\ Problems-Outcomes                                 | Phong van- | Internals     | 443816 chars | 99.65         | 0           | 99.65               | 0.35             | 0.35            | 0               |
| Organisational factors\ Problems-Reward                                   | Phong van- | Internals     | 443816 chars | 99.71         | 0           | 99.71               | 0.29             | 0.29            | 0               |
| Organisational factors\ Problems-Scope                                    | Phong van- | Internals     | 443816 chars | 99.58         | 0           | 99.58               | 0.42             | 0.42            | 0               |
| Organisational factors\ Problems-Steps                                    | Phong van- | Internals     | 443816 chars | 99.9          | 0           | 99.9                | 0.1              | 0.1             | 0               |
| Organisational factors\ Problems-Timelines                                | Phong van- | Internals     | 443816 chars | 99.39         | 0           | 99.39               | 0.61             | 0.61            | 0               |
| Others  | Phong van- | Internals     | 443816 chars | 89.04         | 0           | 89.04               | 10.96            | 10.96           | 0               |
| Others\ Dependence-Vendor   | Phong van- | Internals     | 443816 chars | 99.45         | 0           | 99.45               | 0.55             | 0.55            | 0               |
| Others\ Drivers-change  | Phong van- | Internals     | 443816 chars | 93.9          | 0           | 93.9                | 6.1              | 6.1             | 0               |
| Others\ Opportunities-SelfDevelopment                                     | Phong van- | Internals     | 443816 chars | 99.28         | 0           | 99.28               | 0.72             | 0.72            | 0               |
| Others\ Opposite-cases  | Phong van- | Internals     | 443816 chars | 96.26         | 0           | 96.26               | 3.74             | 3.74            | 0               |

## Appendix J: Vendor selection criteria

| <b>Broad Evaluation Criteria</b>   | <b>Percentage Weightage</b> |
|--|-----------------------------|
| <b>Functionality</b> (Core application's capacity)                             | <b>25</b>                   |
| <b>Implementation capability</b> (Implementation practice of the vendor)       | <b>15</b>                   |
| <b>Flexibility</b> (Flexible to respond quickly to changing market conditions) | <b>20</b>                   |
| <b>The vendor</b> (i.e., size, location, financials, customer references)      | <b>15</b>                   |
| <b>Implementation cost</b> (i.e., license fee and maintenance fee)             | <b>25</b>                   |