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The Importance of Project Manager's Soft Competence on IT Project Success: An Exploratory Study in the Banking Context

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ABSTRACT

The high failure rate of IT projects has continued for more than three decades. The premise of this research is that IT project success depends not only on technical skills and knowledge (such as in civil engineering) but also on the “soft” aspects such as project manager's competence to effectively interact with various stakeholders and align the project with their expectations. This research examines the most critical IT project manager's soft competences required for IT project success in the banking industry. The findings from multiple case studies and survey analysis will have significant implications for both research and practice in the field of IT project success, IT investment and development of IT professionals, especially in the banking sector. (Initial findings from the first case study interviews are shown in Appendix 1.)

Keywords

Project Management, Soft Competence, Information Technology, Project Success, Project Failure

INTRODUCTION

Despite great efforts by project management professionals in developing and implementing standards, process models, methodologies, and guidelines on best practices for IT project management, the failure rate of IT projects continues to be high. The Standish Group (2009) shows around one-third of IT projects were classified as successful in its studies in 2004, 2006 and 2009 (see Figure 1) and the failure rate of IT projects has actually increased further since 2004. What went wrong?

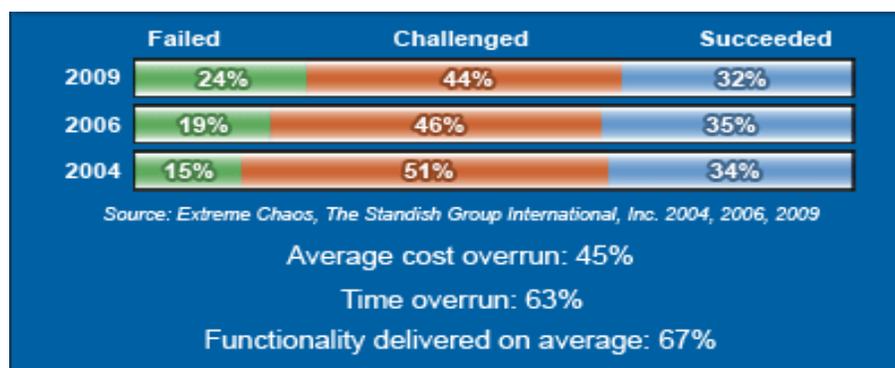


Figure 1. IT Project Success Rate (Standish Group, www.standishgroup.com)

The premise of this research is that unlike non-IT projects where technical knowledge and skills is the major driver of project success, IT projects are more people centered and therefore require more people or soft competence skills for successful project execution. For example, while a residential architect has tools and notations to visually describe a new home in terms of floor plans and elevations, an IT project manager has relatively limited facilities to present the ‘look and feel’ of the expected deliverables to the user group and other stakeholders. In most cases,

significant portions of the finished software will never (and cannot) be touched by the users such as backup and recovery procedures. Thus demonstration of “visibility” (McDonald, 2001) and tangibility (McElroy 1996) of IT projects to stakeholders and ensuring their satisfaction becomes difficult. ‘Visibility’ is signified by completion of a task by looking at the results of that task. Lack of visibility of project tasks at different stages of the project life cycle handicaps the IT project manager’s attempts to gather accurate progress data for effective monitoring and control. ‘Tangibility’, is the ability to quantitatively measure the success/progress of a task, which is affected due to lack of visibility. These differences ultimately make the management of IT projects more difficult than management of some other types of projects. On-going monitoring and corrective actions for deviations on the scope, schedule, budget and goals of the project becomes difficult, thus affecting the success rate. These aspects are further elaborated by Crawford and Pollack (2004) who define the “softness” of a project as a composite of seven factors (see Figure 2). They point out that the “softer” the project, the lower the chance of success as soft projects require more PM’s soft competence to be successful than hard projects. Pollack (2007) pointed out that in this soft project management paradigm shift, people (soft) competences become the key for goal clarity, requirement elicitation and management of stakeholder expectation – factors crucial to IT project success.²

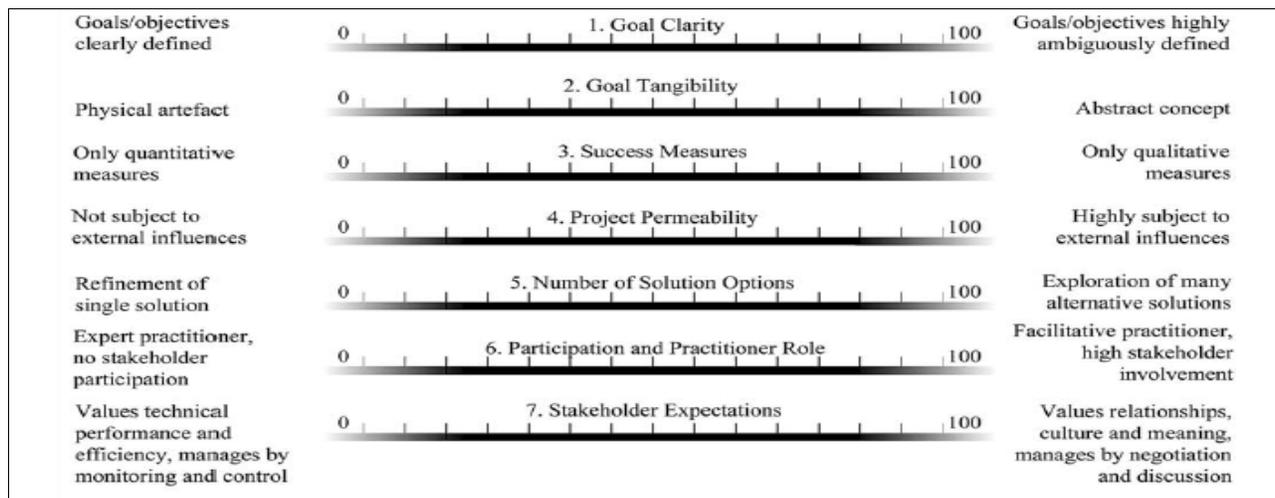


Figure 2. Hard and Soft project dimension Framework (Crawford et. al 2004)

Thus the IT project manager’s soft competence skill set becomes important and is worthy of investigation. According to Toney (2002), “In most situation, a superior project manager is the single most important influence impacting successful project goal achievement”. Information System projects that ranked high in terms of success invariably have a competent project manager (Jiang, Klein & Balloun, 1996; Pinto & Slevin, 1987). Frame (1999) suggests that socially rooted competencies – soft or personal competencies – are very subjective, more difficult to deal with than hard skills, and are more likely to lead to project failure if they are deficient. Thus, there is a need to understand which soft competencies in Project Managers lead to IT project success.

In regard to Project Manager’s attributes, considerable research has been done on competencies that project managers should possess (Crawford, 2000; and Toney, 2002, Frame, 1994; Pinto & Kharbanda, 1996; Reich, 1991). There is abundance of literature (theoretical and empirical) asserting that soft competencies of project participants and project managers are important project success factors (Jiang, 2002; Lechler, 1998; Turner & Muller, 2003). Much of the research has been focused on the technical skills of the project manager (Brown, 2000; Gale, 1999; Lei, Hitt, & Bettis, 1996; Pinto & Kharbanda, 1995; Thamhain, 1991). However, the cumulative number of identified competencies required for success in projects in general appears to be more than 150. To derive practical guidance from such a long list of competencies becomes difficult, since there is no direction on the precise combination of skill sets and their relative importance on successful delivery of IT projects in specific situations. Also, several

² Softness of project is different from project risk. The former is the attribute of the project which, if exists, needs more human interactions among project stakeholders to align or come to consensus and the latter is the event which has positive or negative effect to the project constraints by multiplying the corresponding probability and impact (PMI, 2005).

dimensions of IT project success have been conceptualized in prior research (Graeme and Walter 2008). Success in one dimension may not necessarily mean success in another dimension. Most importantly, there is still lack of agreement about what constitutes project success (Belassi & Tukel, 1996; Cooke-Davies, 2000; Crawford, 2001; Dvir, Raz, & Shenhar, 2003; Pinto & Slevin, 1988). Success means different things to different people (Freeman & Beale, 2003). It therefore becomes necessary to understand the relative importance of soft competencies of Project Managers on different measures of IT project success. The aim of this research is therefore to conduct an exploratory study to

1. Identify the perceptions of IT Project success of the 4 most important stakeholders in a project, namely, Project Manager, manager of project manager, project team members and the client.
2. Determine the crucial soft competencies that a Project Manager must have for the different measures of IT project success by empirically testing the correlations through case study followed by a survey and then statistical analysis.

Our research context is the banking sector which is the base of all business and economic activities. According to Gartner (2007), banking sector has the highest investment to operation ratio on IT expenditure amongst all industries (see Figure 3). The processes and products of banking are highly digitized which facilitates the continual shift of banking transactions from traditional manual methods to the on-line mode, with access provided to customers for self-service. Major banks in the world are investing billions of dollars not only to support their basic operations but also to develop customized IT systems to differentiate themselves from competitors. Hence, the success of IT projects in the banking sector provides an important and interesting context for our exploratory research.

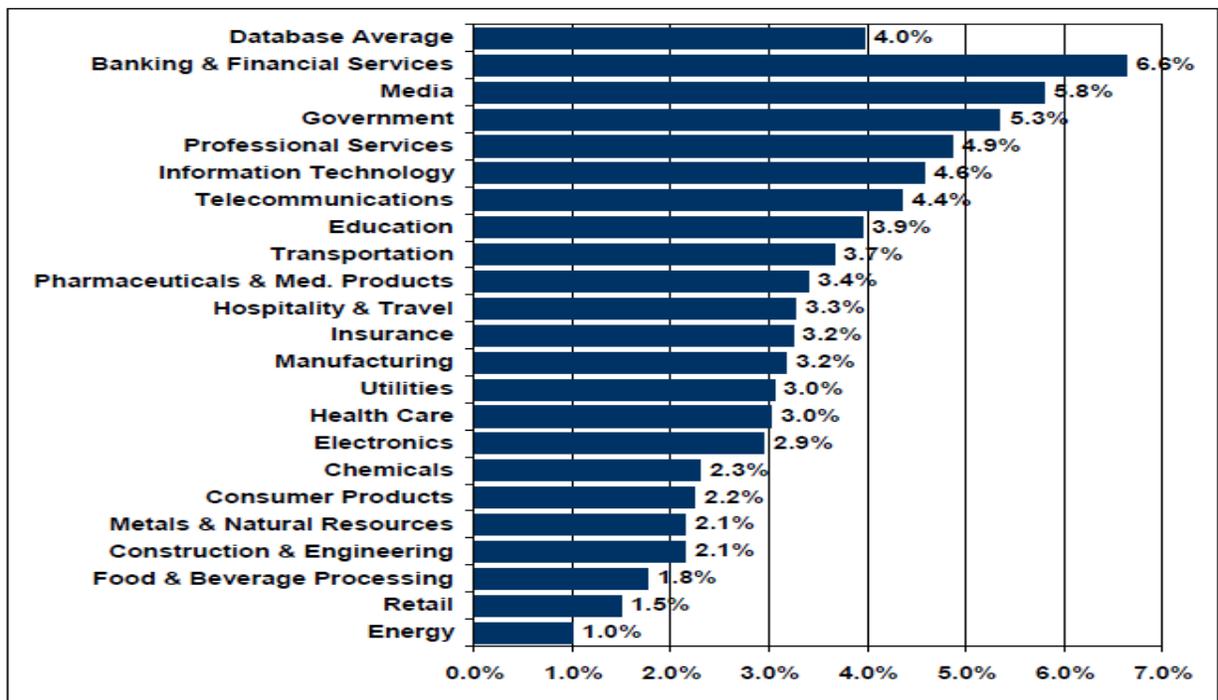


Figure 3. IT spending as a percentage of revenue by industry (Gartner World-wide IT Benchmark Service Trends, 2007)

THEORETICAL FOUNDATION

Since the goal of this research is to investigate the crucial soft competencies of IT project managers that bear on IT project success, an extensive survey of prior research on the constructs of competency, IT Project Success and the link between competency and IT Project Success have been explored.

The Competency Construct

Competence has been described as an underlying characteristic of an individual that causally related to criterion-referenced effective and /or superior performance in a job or situation. (Spencer 1993). Spencer (2003) also divided competencies into central and surface competencies as in Figure 4.

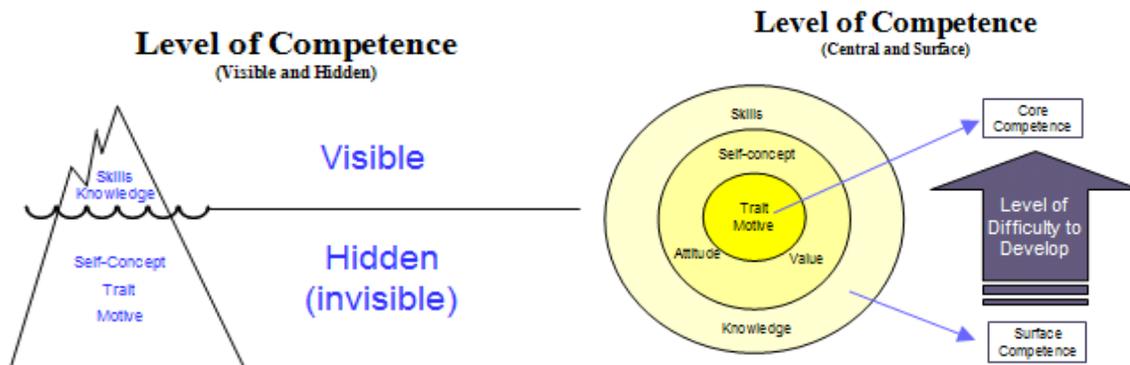


Figure 4. Level of competence (Spencer 1993)

Another classification of competency is along the hard and soft dimensions (Gardiner, 2005), that is based on the nature of the skill. Soft competencies are people skills which involve behavior, while hard competencies are more technical in nature. The literature also mentions these soft competencies as “human” skills (El-Sabaa; 2001), “interpersonal” skills (PMBOK Guide 2004), “micro-social” skills (Kendra and Taplin, 2004), “social” skills (Brandel, 2006) or “personal competence” (PMCD Framework 2007). Skulmoski’s (2005) came up with a soft competence framework by carrying out a qualitative research applying mixed method (modified Delphi and in-depth interviews) on 22 selected IT/IS experts from different sectors. It is a comprehensive and balanced soft competence framework which contains communications, leadership, professional conduct, project management, personal attributes, negotiation and social. This research adopts his framework as a basis for development of the soft competence construct.

IT Project Success Construct

Apart from time and cost factors that have been abundantly discussed in prior research, there are other soft factors that are also mentioned as critical to project success. While efficiency measures (e.g. time, cost and quality) are important dimensions (Pinto & Slevin, 1988a), effectiveness measures (e.g. the benefits to the stakeholders such as the organisation and users, commercial success, and future potential) are also important parameters by which success is measured and assessed (Atkinson, 1999, Shenhar, Dvir, & Levy, 1997). Also one’s perception of success may change during the project’s life cycle (Belassi & Tukel, 1996; Pinto & Slevin, 1988b). Traditionally, project management success has been assessed based on the triple constraints of time, budget and scope and majority of the metrics and skills for developing project professionals were devised based on these criteria. The soft aspects of project success have not received adequate attention.

One view of Project success is from the client’s side. For example, the client evaluates whether the project is of high quality, the money on the project was well spent, the project manager did a good job as a consultant, and whether the same project manager may be hired again as a consultant.

Another perspective of project success comes from the client’s perception of capacity building in the organisation. Letts, Ryan and Grossman (1998) suggest that the three overall outcomes of capacity building include: 1) helping the organization to do what it already does, but better; 2) improving its ability to grow; and 3) improving its ability to change. Therefore, there is a need to understand the perception of IT project success of the important stakeholders from both IT side and client side. By contrasting perceptions getting from different roles of people in the same project, project managers will know where the focus should be put on in order to have more successful results. The phase 1 case study will serve this purpose.

The Link between Competency and Project Success

Crawford (2000) presents the relationship between project management competence, project performance and organizational performance as in Figure 5. She mentions that project management competence has a direct relationship with project performance and organizational performance.

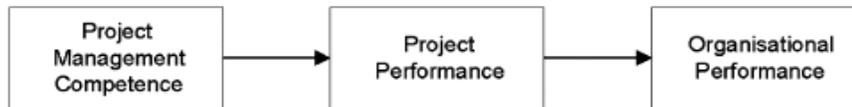


Figure 5. Relationship among PM Competence, Project Performance and Organizational Performance (Crawford, 2000)

However, the relationship showed in this model is linear and can lead to the belief that Project Management Competence is the only aspect contributing to project performance. A more dynamic and comprehensive model, which also relates competences to project success, is presented by Kendra and Taplin (2004). Their open system cultural model for project success takes into consideration cultural factors and is based on four key aspects: Project Manager Competencies, Performance Measurement Systems, Business Process, and Organization Designs. Kendra and Taplin's (2004) model shows the importance of Project Manager's competency in balancing the different value systems in terms of organizational design, performance management and processes and creating a project management culture that is conducive to project success. Essentially, this points to the importance of soft competencies in project success. Kendra and Taplin's (2004) open system cultural model for project success is presented in Figure 6.

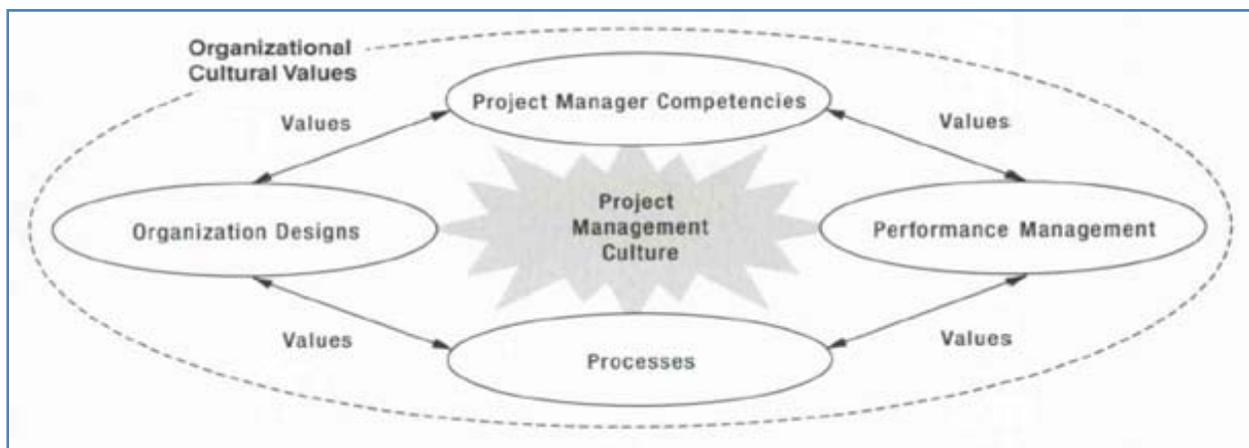


Figure 6. Project Success Model (Kendra and Taplin, 2004)

El-Sabaa (2001) points out that in information systems sector, “human skills” (85.9%) is significantly more important than technical skills (52.5%) in terms of importance. His research involves 126 project managers complete survey forms and indicates soft competence is of greatest influence on the project management practices. El Sabaa's contribution is that it supports Lechler's (1998) conclusion that soft or personal skills contribute greatly to project performance and success; more than technical skills like scheduling. There is a research on the relationship of project manager leadership competency and project success (Muller and Turner, 2007) which indicates that leadership style, managerial competencies and intellectual competencies, which are soft in nature, influence project success.

The Research Model

Our survey of prior academic and practitioner literature indicates that while there is abundance of prior research and published industry reports on the importance of soft competencies, there is still no understanding of the relative importance of the soft competencies and their impact on IT project success. What complicates the issue further is the lack of a consensus and agreed understanding of what constitutes IT project success. Thus it is not known as to what competencies are crucial and how they impact different dimensions of project success. Owing to these reasons, theory in Project Management lacked a coherent underlying theoretical basis earlier (Shenhar 1996) and it still

continues to remain implicit (Pollack 2007). Assertions have not been empirically tested. Thus this research tries to empirically test a research model which asserts that while both soft competencies and hard competencies are crucial, there is perhaps a greater influence of soft competencies on IT project success. Thus the most crucial soft competencies are included in the model and their relative importance and ability to explain the variance in IT project success are empirically tested. The rankings of soft competencies collected from the interviews of PMs and major project stakeholders are determined. Similarly, the rankings of the different crucial parameters of project success are prioritized. The influence of the identified set of crucial soft competencies on the most important determinants of project success, apart from the time and cost dimensions, is tested through survey method.

Our tentative research model is shown below.

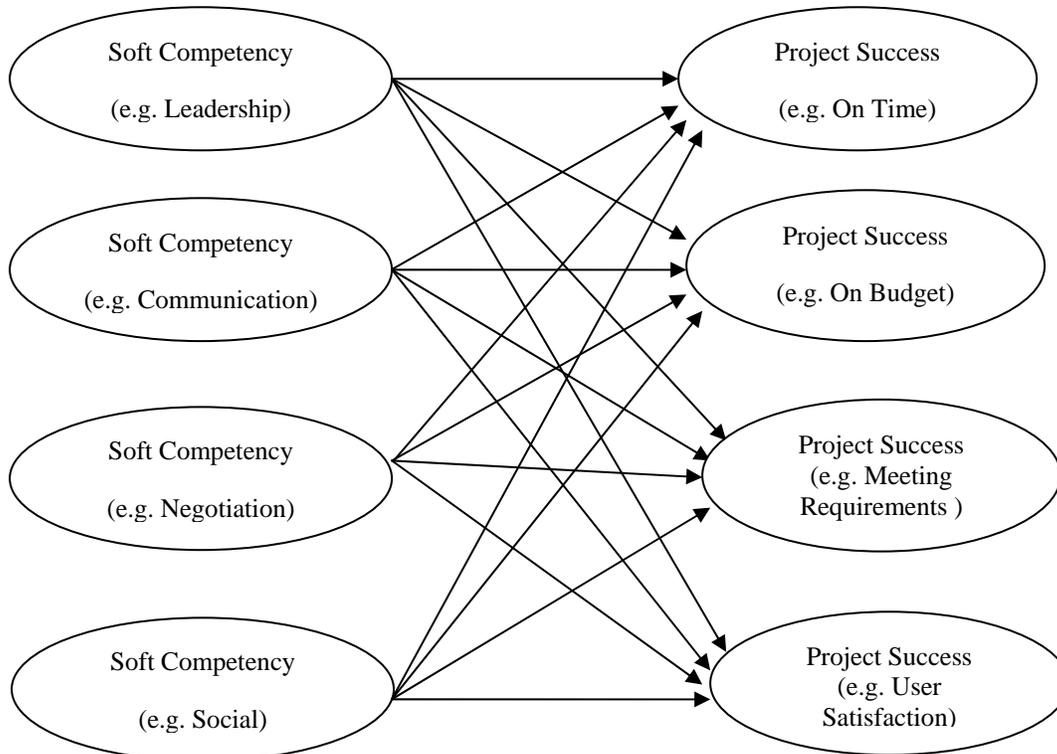


Figure 7. Research Model

Since a large number of IT projects are now outsourced, our research model on different project settings will be tested so as to draw meaningful insights on the variance of impact of the soft competencies on IT project success in different contextual scenarios. Subsequently, it is also intended to investigate the moderating effect of certain contextual variables such as project team size, geographic dispersion and project duration on the link between the identified soft competencies and project success.

RESEARCH METHODOLOGY

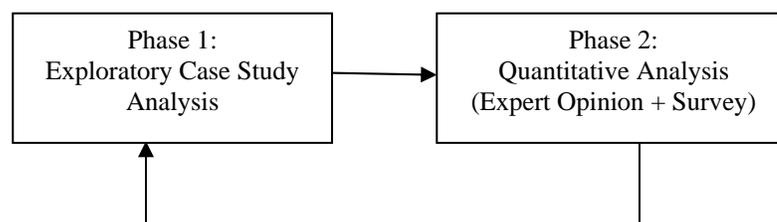


Figure 8. Research Approach

Phase 1 Study: Exploratory Case Study

Selection of Organisations for Case Study Analysis: There are 200 licensed banks in Hong Kong (HKMA 2008). 3 categories of banks capture the majority of the market: international banks, local banks and Chinese banks. One sample from each of the categories was selected. Because the importance, reliability and validity of the large number of soft competences and their measures in prior literature have not been empirically verified, case studies were considered appropriate to have a first hand impression of the stakeholders perspectives of soft competences and project success. Yin (1984) suggests that case studies are appropriate where the objective is to study contemporary events, and where it is not necessary to control behavioral events or variables. To understand the nature of IT projects in banking, detailed and rich contextual information about the current practice of project management in banking was considered necessary.

Multiple Stakeholders Analysis: The IT project manager, manager of the project manager, user coordinator/representative and a project team member in each selected project in the sample organizations would be interviewed. They were selected for their close working relationship and interactions with the IT project manager. Perceptions of the importance of soft skills of these four different stakeholders would provide a comprehensive and holistic view of project success from different perspectives.

Format of Interview: Open questions were asked first so that answers from the respondents would not be influenced by the comprehensive list of structured follow-up questions, which have been derived from prior empirical researches.

Three case studies with prioritized list of soft competence (and their measures) and dimensions of project success considered crucial by the 4 stakeholders were the outcome of this part of the study. The identified parameters from the first case study are shown in Appendix 1. The data from case studies would form the input for the second phase of this study.

Phase 2 Study: Expert Opinion and Survey

Experienced professors in project management and project management practitioners such as “Certified Project Director” by the Hong Kong Institute of Professional Certification will participate in the card sorting of questionnaire items, based on the procedure suggested by Moore and Benbasat (1991). The finalised items in the survey questionnaire will be based on a 7-point Likert scale measure for the respondents to indicate the importance of both Soft Competency and IT Project Success Criteria. The survey instrument would also have questions to determine the contextual variables that are likely to have a moderating effect on the soft competencies and project success. After data collection, descriptive statistics will analyze the mean and standard deviation for each questionnaire item, which will reflect the most important soft competences of IT project managers and the most important criteria for IT project success.

Further analysis will be based on Principle Component Analysis (PCA) for identifying the items with higher loading and re-grouping them into respective emerging constructs. Discriminant analysis will be used to determine the validity of the emerging constructs. This will be followed by Correlation Analysis to determine the relationship of the soft competence factors and each of the IT project success factors.

PMI (Hong Kong Chapter), Hong Kong Computer Society (HKCS) and a university have agreed to support the survey. The respondents will be members of the two of the largest IT professional bodies in Hong Kong and the alumni from related disciplines of the university.

CONCLUSION

What differentiates this study from previous ones is the first systematic and in-depth scholarly research on (1) the correlation between soft competence and project success (2) for IT project managers (3) in banking context. It will make contribution to both theory and practice. Specifically, contributions to practice include selection of project managers and the development of the appropriate competences of IT managers.

WHAT AUTHORS PROPOSE TO PRESENT AT THE CONFERENCE

The authors intend to present (1) the importance of soft competence of project managers in banking IT projects (2) development of the research model and research design, and (3) some initial findings of the case study interviews (phase 1) and (4) some sample questionnaire items for the survey study (phase 2).

APPENDIX 1: INITIAL FINDINGS FROM THE FIRST CASE STUDY INTERVIEWS

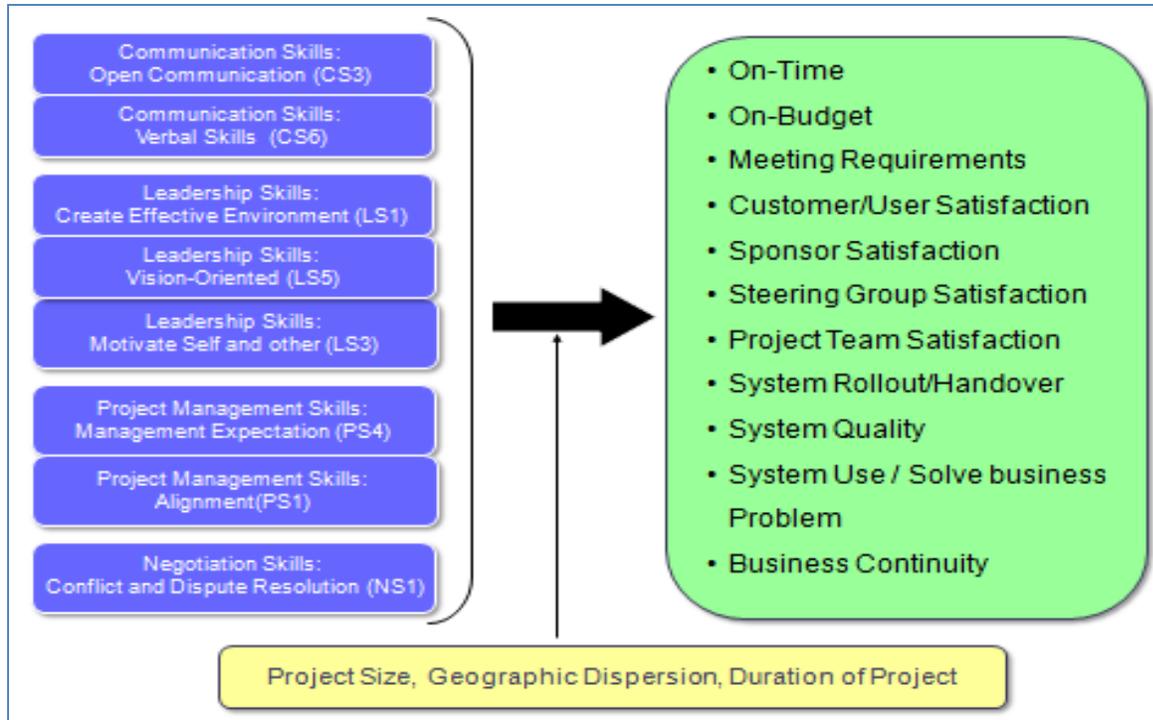


Figure 9. Initial Research Findings

APPENDIX 2: CURRENT STATUS OF THE RESEARCH PROJECT

Case study interviews have been started to collect the in-depth information to refine the research model.

Implementation Schedule:

Phase	Milestone	Status
Research Design	In-depth review of literature on soft competence for IT project managers and project success	Continuous
Data Collection & Analysis		
Phase 1	Design case study select criteria Choose case study teams	Done
Phase 1	Carry out first (pilot) case study Case study write-up and analysis Modified Case study protocol	Done
Phase 1	Carry out 2 nd case study	In progress
Phase 1	Carry out 3 rd case study Carry out 4 th case study, if needed	To-be-done in one and a half year
Phase 1	Carry out cross-case analysis Modification of hypothesis, variables, survey instrument, if necessary	
Phase 2	Expert validation on survey instruments Pilot survey, mass survey Survey result analysis	
Finalization	Submission of thesis	

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