

## Abstract

Information Technology (IT) and Information System (IS) has become an essential part of all business functions. Consequently, the involvement of IT and IS in Human Resource Management (HR) is intensifying. HR is becoming a more technology-based function and HR technology trend is also changing radically from year to year. However, the IT and IS project failure rates are also rather apparent. Globally, the failure rate of IT and IS project is high and is expected to increase in the coming years. GLCs invest a huge sum of money and resources on IT and IS related HR projects which typically does not achieve the actual planned objectives resulting in a great loss to the organization. This study therefore aimed to investigate the reasons for IT and IS related HR project implementations in a GLC. The factors examined include technical complexity, quality of human resource and capabilities, lack of management support and commitment, poor cross-functional coordination, lack of project management skills and inadequate change management initiatives. Questionnaires were distributed to the project team members in the GLC. The research revealed that technical complexity, poor cross-functional coordination, lack of project management skills and lack of management support and commitment are the factors contributing towards the failure of IT and IS related HR Project Implementations in the organization. Additionally, technical complexity appears to be the most dominant factor leading to the failure of IT and IS related HR Project Implementations in the organization. The study was then concluded with recommendations directed towards the management team, project teams and the Human Resource department of the organization.

(261 words)

## ACKNOWLEDGEMENT

Foremost, I would like to express my gratitude to my supervisor Mr.Ponusamy for his guidance and support given to me throughout the study. Besides my supervisor, I would also like to thank the project manager of the Government-Linked Company (GLC) for allowing me to perform the study in his company and the rest of the participants of the study from the GLC. Without their support, I would not have accomplished this study.

My sincere thanks also goes to my parents, Mr. Purushothaman and Mrs. Nalammah, for their continuous encouragement and motivation at all times throughout my life. I would also like to thank my brother, Mr.Viknesh for always inspiring me and giving me the confidence to succeed.

I would like to thank my friends, Yoka, Sudha, Suthan, Miro, Natasha, Meera, Jane, Logesh and Deva who have directly and indirectly supported me throughout this study. My sincere gratitude also goes to Mr.Sathasivam, who has always been a great mentor and encouraged me to look at Human Resource as a passion rather than a job.

The journey was made wonderful and smooth by these great people. Thank you.

## Declaration by Candidate

I hereby declare that this thesis is my own work and effort and that it has not been submitted anywhere for any award. Where other sources of information have been used, they have been duly acknowledged.

Name: **Sangari Purushothaman**

Signature: 

Date: **28<sup>th</sup> April 2014**

## Contents

|   |     |
|---|-----|
| Abstract .....  | i   |
| ACKNOWLEDGEMENT .....   | ii  |
| Declaration by Candidate .....  | iii |
| LIST OF FIGURES .....   | vi  |
| LIST OF TABLES .....  | vii |
| CHAPTER 1 .....   | 1   |
| Introduction .....  | 1   |
| 1.0 Chapter Overview .....  | 1   |
| 1.1 Research Background .....   | 1   |
| 1.2 Problem Definition .....  | 3   |
| 1.3 Background of GLC under study.....                                  | 7   |
| 1.4 Research Questions .....  | 8   |
| 1.5 Research Objectives.....  | 8   |
| 1.6 Assumptions .....   | 8   |
| 1.7 Limitations .....   | 9   |
| 1.8 Significance of the Research .....                                  | 9   |
| 1.9 Structure of Thesis.....  | 10  |
| CHAPTER 2 .....   | 12  |
| Literature Review .....   | 12  |
| 2.0 Chapter Overview .....  | 12  |
| 2.1 Introduction.....   | 12  |
| 2.2 Information Technology and Systems.....                             | 13  |
| 2.3 Information Technology and Systems in HRM.....                      | 15  |
| 2.4 Project Implementation .....  | 19  |
| 2.5 Outlook of Project Failures .....                                   | 21  |
| 2.6 Overview of Factors Leading to the Failure of Implementations ..... | 28  |
| 2.7 Research Framework.....   | 39  |
| 2.8 Hypothesis.....   | 41  |

|  |     |
|--|-----|
| CHAPTER 3.....   | 42  |
| Research Methodology .....   | 42  |
| 3.0 Chapter Overview .....   | 42  |
| 3.1 Research Design .....  | 42  |
| 3.2 Research Sampling .....  | 43  |
| 3.3 Data Collection .....  | 45  |
| 3.4 Measuring Instrument .....   | 46  |
| 3.5 Questionnaire Preparation.....   | 47  |
| 3.6 Data Analysis.....   | 50  |
| 3.7 Ethical Consideration .....  | 51  |
| CHAPTER 4.....   | 52  |
| Results and Discussions.....   | 52  |
| 4.0 Chapter Overview .....   | 52  |
| 4.1 Reliability Analysis .....   | 52  |
| 4.2 Validity Analysis.....   | 54  |
| 4.3 Descriptive Analysis.....  | 60  |
| 4.4 Summary of Success/Failure Rate .....  | 65  |
| 4.5 Correlation Between Independent and Dependent Variable.....                  | 70  |
| 4.6 Reasons for the failure of IT and IS related HR Project Implementations..... | 74  |
| 4.7 Summary of Hypothesis Testing .....  | 79  |
| 4.8 Discussion and Analysis .....  | 82  |
| CHAPTER 5.....   | 84  |
| Conclusion and Recommendation .....  | 84  |
| 5.0 Chapter Overview .....   | 84  |
| 5.1 Research Findings.....   | 84  |
| 5.2 Conclusion .....   | 85  |
| 5.3 Recommendation.....  | 87  |
| 5.4 Future Research .....  | 91  |
| REFERENCES.....  | 93  |
| APPENDIX.....  | 105 |

## LIST OF FIGURES

|            |  |    |
|------------|--|----|
| Figure 1.1 | Projects Failure Rate Survey Report                              | 3  |
| Figure 1.2 | Human Resource Project Implementation Framework                  | 5  |
| Figure 2.1 | IT and IS in Organizations                                       | 14 |
| Figure 2.2 | Information Technology and Systems coverage of the HR Functions  | 16 |
| Figure 2.3 | Components of HR System<br>(Limited to Workforce Management)     | 17 |
| Figure 2.4 | Project Activities and Timeline for IT/IS Project Implementation | 21 |
| Figure 2.5 | Information Technology Capital Investment                        | 22 |
| Figure 2.6 | Historical Project Failure Rates                                 | 23 |
| Figure 2.7 | Success or Failure Based on Project Size                         | 24 |
| Figure 2.8 | Research Framework   | 40 |
| Figure 4.1 | Illustration of Overall Satisfaction of Key Stakeholders         | 66 |
| Figure 4.2 | Illustration of Overall Successfulness in Meeting Project Goals  | 68 |
| Figure 4.3 | Regression Residual Plot   | 75 |

## LIST OF TABLES

|            |  |    |
|------------|--|----|
| Table 2.1  | Essentials of Project Management   | 20 |
| Table 2.2  | Factors Identified by Other Researchers                                  | 28 |
| Table 3.1  | Measurement and Scales   | 48 |
| Table 4.1  | Cronbach Alpha (Reliability) Interpretation                              | 52 |
| Table 4.2  | Overall Reliability  | 53 |
| Table 4.3  | Summary of Cronbach Alpha (Reliability Test)                             | 54 |
| Table 4.4  | Validity Test for Technical Complexity (IV 1)                            | 55 |
| Table 4.5  | Validity Test for Quality of Human Resource and Capabilities<br>(IV 2)   | 56 |
| Table 4.6  | Validity Test for Lack of Management Support and<br>Commitment (IV 3)    | 57 |
| Table 4.7  | Validity Test for Poor Cross-Functional Coordination (IV 4)              | 58 |
| Table 4.8  | Validity Test for Lack of Project Management Skills (IV 5)               | 59 |
| Table 4.9  | Validity Test for Inadequate Change Management (CM)<br>Initiatives (IV6) | 59 |
| Table 4.10 | Profile of Respondents   | 61 |
| Table 4.11 | Normality Test   | 63 |
| Table 4.12 | Mean Analysis of Variables   | 64 |
| Table 4.13 | Rating of Overall Satisfaction of Key Stakeholders                       | 66 |
| Table 4.14 | Rating of Overall Successfulness in Meeting Project Goals                | 68 |
| Table 4.15 | Categorization of the Correlation Coefficient Values                     | 70 |
| Table 4.16 | Pearson's Correlation Analysis   | 70 |
| Table 4.17 | Multicollinearity Test   | 75 |
| Table 4.18 | Regression Analysis  | 76 |
| Table 4.19 | Validation of Regression Analysis  | 79 |
| Table 4.20 | Summary of Hypothesis Testing  | 80 |

## CHAPTER 1

### Introduction

#### 1.0 Chapter Overview

This chapter details the overview of the research topic. The scope and the content of the research is discussed in depth. The problem definition which is the foundation of the research is presented in this chapter. Subsequently, the problem definition points to the research questions and research objectives of the study. The significance of the study is also further explained in this chapter.

#### 1.1 Research Background

Information technology has become an essential element in aiding the global networking era. The rise of information technology has also posed various challenges to the traditional way of executing Human Resource practices and services in the organization (Bondarouk & Ruel, 2009; cited in Chakraborty & Mansor, 2013). The re-engineering of HR functions is aided by technology to support the current demand for work design changes, innovation and knowledge-based organization. The endurance of organizations is now determined by the ability of the human resource professionals to enhance speed, effectiveness and cost containment of the operations involving the employees. This ability is made possible by technological advancements. Something that was impossible previously such as virtual HR is now applied by various organizations due to the sophistication of information technology and systems (Mishra & Akman, 2010).



By leveraging information technology on Human Resource Management, an organization is able to tackle strategic functions and at the same time operate in a flexible, cost-efficient and customer-oriented mode (Snell, Stueber & Lepak, 2002; cited in Mishra & Akman, 2010). Implementation of any information technology systems in the Human Resource Department will be initiated via projects which kick start with the project plan. Some of the elements in the projects are implementation schedules, project team, policy, procedures, steering committee, installation, training, conversion and testing (Rampton, Turnbull, Doran, 1999).

As technology has become a tool for competing in various industries, the demand for better technology and expansion brings upon various successful and failed Information Technology projects. According to Whitney & Daniel (2013), the Information Technology industry is more fragile and vulnerable to risk and failures compared to other industries. Whitney & Daniel (2013) also revealed the statistics results of a study conducted by The Standish Group of over 50,000 Information Technology projects from the year 1992 until 2004. The study revealed that only 29% of the projects ended successfully.

This appears to be consistent with the findings of KPMG (2012) detailing that an increase in project failure rate in the year 2012 is the second key issue identified in the study on project management. Typically a successful project is defined via timely delivery, delivery on-budget and delivery as per stated requirements. The study conducted by KPMG (2012) as per Figure 1.1 below illustrates the significant decrease in project success rate in the year 2012 compared to 2010.

|   | 2010 | 2012 |
|---|------|------|
| Consistently on budget                      | 48%  | 33%  |
| Consistently on time                        | 36%  | 29%  |
| Consistently delivering stated deliverables | 59%  | 35%  |

Figure 1.1: Projects Failure Rate Survey Report

*Source: KPMG (2012)*

Information technology and systems projects are often associated with a black swan as it touches various aspects of the organization and mismanagement of the project leads to loss of jobs, profits and at times destroys the whole organization (Budzier, 2011). The importance of information technology and systems for Human Resource professionals to gain a human capital competitive advantage is rather apparent but the failure rates of Information Technology and Systems project implementations brings upon fear to various organizations.

## 1.2 Problem Definition

Human Resource Management has evolved and it is a vital function that contributes to the organization's success. The traditional purpose of Human Resource Management which was to merely perform administrative functions such as preparing documents and running payroll is no longer valid. Various literatures

has revealed the current functions of Human Resource Management ranges from strategic human resource planning, selection, recruitment, career planning, performance management, training, competency management, employee motivation and includes maintaining a good organizational culture (Anca-loana, 2013).

Due to the evolved function of Human Resource Management, elaborating HR system components and structure is one of the important themes of Strategic Human Resource Management (Lengnick-Hall, et al., 2009). The criticality of Human Resource Function as it directly and indirectly implicates all employees in the organization, results in Human Resource Projects being most vulnerable and labelled as a high risk effort.

Adoption of information technology and systems in Human Resource functions allows for saving time, cost cutting, better contribution to strategic decision making and the ability to manage complex information entities and efficiency (Ankrah & Sokro, 2012).

Information technology and systems is beyond the expertise of the Human Resource function and therefore the organization usually sets up a project team to plan and execute the implementation of the system. This makes the project implementation more complex as proper alignment of expectations, objectives, requirements and processes is needed between the Human Resource function team and the project team. The common mistake done by multinational organizations is assuming that the hiring of experts or consultants to be involved in the project implementation can ensure success.

Hiring of experts such as Accenture and IBM to lead the implementation of information technology and systems in the Human Resource function by multinational organizations would not necessarily guarantee success. Accenture which is a consulting giant in the area of management, human resource and technology has the record of several rollout failures including failure to deliver to United States' Department of Defence and Marine Corporation (Equal Justice Foundation, 2014). The companies with excellent Human Resource Project Implementation framework as illustrated by Figure 1.2 below also face the risk of failure in implementation.

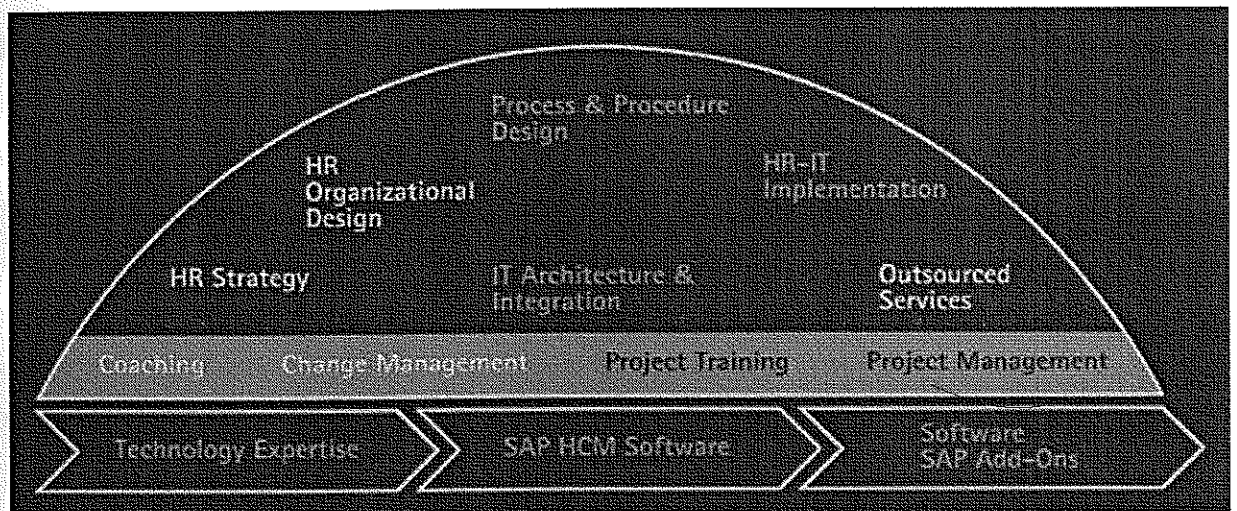


Figure 1.2: Human Resource Project Implementation Framework

*Source: Accenture (2008)*

The transformation of HR services is rather outward in big organizations. In organizations that operates in various businesses and country, Information Technology and Systems is used in HR to monitor policy implementation, performance, to facilitate communication and networking and manage HR metrics across sites and borders (Gunnigle, et al., 2007). IT and IS related projects are crucial in HR function of a company to support additional information requirements

and data collection of international operations and to tailor the application to suit requirement of numerous sites (Deans & Karwan, 1994). Subsequently, this makes the implementation of Information Technology and Systems Related Human Resource (HR) Projects in multinational organizations rather complex. There are many reasons for the failure of Information Technology and Systems Related Human Resource (HR) Project Implementation in multinational organizations. Research conducted reveals that Information Technology and Systems (IT and IS) projects are more likely to fail compared to other genre of projects; due to a myriad of reasons (Whitney & Daniel, 2013).

Numerous researches have been performed to understand the reason behind the failure of IT projects but little research has been performed on the factors leading to the failure of IT and IS related Human Resource Projects. As IT and IS projects are function-based and no single approach can work for all functions across the organization, the factors leading to failures of a general Information Technology and Systems project will not necessarily be the same in the Human Resource environment. As the Human Resource Management of an organization deals with employees, the most important asset of an organization, any hiccups can bring upon a huge impact to the company.

Medium-sized organizations are yet to implement information technology and systems to aid HR functions due to various reasons such as lack of management support, defensiveness about revealing current operations and the lack of appropriate knowledge and skills. However, these problems become more complex in big organizations such as GLCs and MNCs as operating in an international realm requires the implementation IT and IS related projects in the HR environment to support business activities on a larger scale (Deans & Karwan, 1994). In addition, according to Deans & Karwan (1994), U.S. based companies face many obstacles in the implementation of IT and IS related HR projects. Among the prevailing obstacles are the development of integrated infrastructure, rapid

changes in requirement and technology, involvement of multiple vendors (Deans & Kane, 1992; cited in Deans & Karwan 1994).

The combination of the evolved Human Resource function and complex Information Technology and Systems function results in complications in the implementation of Information Technology and Systems Related Human Resource Projects. It is essential for organizations to understand the reason behind the failure of this sort of projects to address the issue based on the identified sources.

### **1.3 Background of GLC under study**

This study is conducted in a GLC headquartered in Kuala Lumpur. Due to confidentiality reasons the name of the GLC is not revealed in this study. This GLC was established almost 40 years ago and is currently ranked among Fortune 500's largest corporations in the world. The company has put forward various IT and IS related HR projects in order to support the integration of the local and global operations which consist of more than 40,000 employees. The implementation of various HR projects in this organization intend to build the capacity to meet future challenges, enable better management of global workforce, to make better use of talent and skills available in the organization, enabling a faster response to business changes, providing value added services, improvement in productivity and to reduce overall operating cost.

For every IT and IS project implementation in the HR function, the management team of the GLC under study would typically set up a project team that consist of both GLC's personnel and consultants from different organizations. The project would be led by the Project Management Office (PMO) in charge of governing, planning, executing and supporting the end-to-end implementation.

#### **1.4 Research Questions**

1. What are the factors contributing towards the failure of Information Technology and Systems Related Human Resource Project Implementation in the organization?
2. What is the most dominant factor leading to the failure of Information Technology and Systems Related Human Resource Project Implementation in the organization?

#### **1.5 Research Objectives**

1. To identify the important failure factors of Information Technology and Systems Related Human Resource Project Implementation in the GLC under study.
2. To identify the most prevailing factor leading to the failure of Information Technology and Systems Related Human Resource Project Implementation in the organization.

#### **1.6 Assumptions**

1. The respondents to the survey conducted are well aware of the background of the topic and the reason behind the research.
2. Team member's responses are discrete, on individual basis and not influenced by one another.
3. Team member's responses are based on their experience in HR-related projects only.

### 1.7 Limitations

1. The small sample population from the chosen companies may not be representative of the all the project teams involved in Information Technology and Systems Related Human Resource Projects.
2. The limitation in the number of employees involved in the sample size due to the time factor.
3. The lack of detailed study on the Information Technology and System Related project implementation in the Human Resource Function which would result in better evaluation of the failure factors compared to adopting the standard Information Technology and System Project Implementation failure factors.

### 1.8 Significance of the Research

1. **For Management Team/Organizations:** The findings of the study would be helpful for the management team to understand the complications behind the Information Technology and Systems Related Human Resource Project Implementation and subsequently to understand the importance of setting realistic goals for the project team. The study will also serve as a foundation for the management team to evaluate the details on the projects to be executed and work on a better alignment of expectation of the outcome with the project team. This study will also serve as a basis to encourage the management team to support and track the progress of the project team throughout the implementation process.