THE IMPACT OF INFORMATION SYSTEM (IS) SUCCESS TOWARDS
EMPLOYEES’ PERFORMANCE: A CASE STUDY ON CONTINENTAL TIRE
PETALING JAYA, SELANGOR, MALAYSIA.

ROHAYU BINTI MUHD SALLEH

This report is submitted to Faculty of Technology Management and Technopreneurship
(FPTT)
Universiti Teknikal Malaysia Melaka
In partial fulfilment for Bachelor of Technology Management (Technology Innovation)

Faculty of Technology Management and Technopreneurship (FPTT)
Universiti Teknikal Malaysia Melaka

JUNE 2017
DECLARATION

I hereby declare that the report has been prepared by my own self except the summaries and citation that I have clarified the resources.

Signature : ..........................................
Name : ..........................................
Date : .............................................
DEDICATION

I would like to dedicate the success of the Chapter 1, 2, 3, 4 and 5 of this project report especially to my parents. The hard work and sacrifices that they have made for me to further my studies would not be enough to pay back by just submitting the report but beyond that. Therefore, I am proud and honored to have them as my parents. Secondly, dedication to all my siblings that has aid me a lot in term of spirit support. Last but not least, to my lecturers whom also as my supervisor for this Final Year Project Report, Dr Yusri bin Arshad, my panel Pn. Norazah Binti Abdul Aziz and also my Final Year Project friends.
ACKNOWLEDGMENT

Alhamdulillah. Thanks to Allah SWT, whom with his willing giving me the opportunity to complete this Final Year Project which is title the Impact Management Information System (MIS) training towards employees’ performance: a case study on Continental Tire Petaling Jaya, Selangor, Malaysia. this final year project report was prepared for Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka (UTeM), basically for students in final year to complete the undergraduate program that leads to the degree of Bachelor of Technology Management (Innovation Technology) with Honours.

Furthermore, I would like to express my sincere gratitude to my supervisor, Dr Yusri bin Arshad for the continuous support of my research, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me in all the time of research and writing of this report. I also want to thanks the lectures and my final year project team for the guidance and advices.

Deepest thanks and appreciation to my parents, family, friends and other for their cooperation, encouragement and full of support for the report completion, from the beginning till the end. Lastly, I would like to thank everyone who involved directly in the completion of this final year project.
ABSTRACT

For many years researchers have been troubled with the evaluation of Information Systems (IS) concluding to a lack of understanding as to the time, methods and tools for measuring the impact of IS success towards employees’ performance. Motivated by this lacuna in the literature, this research explored the relationship between IS success towards employees’ performance. The theoretical framework is based on the Delone and McLean’s (D&M) IS success model which is widely adopted in the IS research. Based on a comprehensive literature review on the older and more recent studies the research framework incorporated several new items used by researchers for the measurement of the D&M dimensions. This research contributes to existing research in the following ways. First, this study extends our knowledge on IS effectiveness as we adapted and modified DeLone and McLean's model of IS success to investigate a relationship between independent variables and dependent variable. The results indicate a significant statistical link between IS Success and employees’ performance measures.
Selama bertahun-tahun penyelidik telah bermasalah dengan penilaian Sistem Maklumat (IS) menyimpulkan kekurangan pemahaman tentang masa, kaedah dan alat untuk mengukur kesan kejayaan IS terhadap prestasi pekerja. Didorong oleh lakuna ini dalam kesusasteraan, penyelidikan ini meneroka hubungan antara kejayaan SM terhadap prestasi pekerja. Rangka kerja teori adalah berdasarkan Delone dan McLean (D & M) IS model kejayaan yang secara meluas diterima pakai dalam IS penyelidikan. Berdasarkan kajian literatur yang komprehensif pada yang lebih tua dan lebih baru-baru ini, Kajian kerangka penyelidikan yang diperbadankan beberapa item baru yang digunakan oleh penyelidik untuk pengukuran D & M dimensi. Kajian ini menyumbang kepada penyelidikan yang sedia ada dengan cara yang berikut. Pertama, kajian ini meliputi pengetahuan yang kita sesuaikan dan diubah suai model DeLone dan McLean untuk berjaya IS untuk menyiasat hubungan antara pembolehubah bebas dan pembolehubah bersandar. Keputusan menunjukkan pautan statistik yang signifikan antara IS Kejayaan dan langkah-langkah prestasi pekerja.
TABLE OF CONTENT

DECLARATION

DEDICATION

ACKNOWLEDGEMENT

ABSTRACT

ABSTRAK

LIST OF TABLE

LIST OF FIGURE

LIST OF APPENDICES

CHAPTER 1: INTRODUCTION

1.1 Background of study
   1.1.1 Management Information System (MIS)  2
1.2 Problem Statement
1.3 Research Question
1.4 Research Objective
1.5 Scope and significance of Study
1.6 Limitations and Key Assumptions of Study
1.7 Structure of Thesis
1.8 Summary

CHAPTER 2: LITERATURE REVIEW
CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction 19
3.2 Research design 19
3.3 Methodological choices 20
3.4 Data Collection Source 21
3.5 Research Location 22
3.6 Research Strategy 22
3.7 Time Horizon 22
3.8 Scientific Canons 23
3.8.1 Reliability 23
3.8.2 Validity and Reliability of the study 24
3.8.3 Internal Validity 24
3.8.4 External Validity 24
CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 Introduction 30
4.2 Pilot Test 30
4.3 Descriptive Analysis 32
4.4 Scale measurement 38
  4.4.1 Internal Reliability Test 38
4.5 Inferential Analysis 40
  4.5.1 Pearson Correlation Analysis 40
4.6 Hypothesis Testing 45
4.7 Multiple Regression Analysis 48
4.8 T-Test 52

CHAPTER 5: DISCUSSION AND RECOMMENDATION

5.1 Introduction 53
5.2 Discussion of Research Findings 53
5.3 Limitation of Study 59
5.4 Recommendation for Future Research 60
5.5 Summary 61

BIBLIOGRAPHY 62-65

APPENDICES 66-89
## LIST OF TABLE

<table>
<thead>
<tr>
<th>TABLE</th>
<th>TITLE</th>
<th>PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Reliability Statistic for Pilot Test</td>
<td>31</td>
</tr>
<tr>
<td>4.2</td>
<td>Reliability Test on Actual Survey</td>
<td>31</td>
</tr>
<tr>
<td>4.3</td>
<td>Respondent Demographic of Gender</td>
<td>33</td>
</tr>
<tr>
<td>4.4</td>
<td>Respondent Demographic of Race</td>
<td>34</td>
</tr>
<tr>
<td>4.5</td>
<td>Respondent Demographic of Age</td>
<td>35</td>
</tr>
<tr>
<td>4.6</td>
<td>Respondent Demographic of Education Level</td>
<td>36</td>
</tr>
<tr>
<td>4.7</td>
<td>Respondent Demographic of Information System</td>
<td>37</td>
</tr>
<tr>
<td>4.8</td>
<td>Cronbach’s α Coefficient Size</td>
<td>39</td>
</tr>
<tr>
<td>4.9</td>
<td>Reliability Test Statistics</td>
<td>39</td>
</tr>
<tr>
<td>4.10</td>
<td>Reliability Analysis for The Study</td>
<td>39</td>
</tr>
<tr>
<td>4.11</td>
<td>Rules of thumb about Correlation Coefficient Size</td>
<td>41</td>
</tr>
<tr>
<td>4.12</td>
<td>Correlation between System Quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Towards Employees’ Performance</td>
<td>41</td>
</tr>
<tr>
<td>4.13</td>
<td>Correlation between Information Quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Towards Employees’ Performance</td>
<td>42</td>
</tr>
<tr>
<td>4.14</td>
<td>Correlation between Service Quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Towards Employees’ Performance</td>
<td>43</td>
</tr>
<tr>
<td>4.15</td>
<td>Correlation between System Use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Towards Employees’ Performance</td>
<td>43</td>
</tr>
</tbody>
</table>
4.16 Correlation between User Satisfaction Towards Employees’ Performance

4.17 The summary of hypothesis testing from the correlation analysis

4.18 Multiple Linear Regression on Five Independent Variables and MIS Training Impacts Towards Employees’ Performance at Continental Tire PJ, Selangor. (Model Summary)

4.19 Multiple Linear Regression on Five Independent Variables and MIS Training Impacts Towards Employees’ Performance at Continental Tire PJ, Selangor. (ANOVA)

4.20 Multiple Linear Regression on Five Independent Variables and MIS Training Impacts Towards Employees’ Performance at Continental Tire PJ,Selangor. (Coefficients)

4.21 Hypothesis Testing for All Variables

4.22 Correlations Between Variables

4.23 Multiple Linear Regression on Five Independent Variables and MIS Training Impacts Towards Employees’ Performance at Continental Tire PJ, Selangor. (Coefficients)
## LIST OF FIGURE

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>TITLE</th>
<th>PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>The DeLone and McLean Model (1992)</td>
<td>11</td>
</tr>
<tr>
<td>2.7</td>
<td>The Research Framework of the Study</td>
<td>13</td>
</tr>
<tr>
<td>4.1</td>
<td>Respondent Demographic of Gender</td>
<td>33</td>
</tr>
<tr>
<td>4.2</td>
<td>Respondent Demographic of Race</td>
<td>34</td>
</tr>
<tr>
<td>4.3</td>
<td>Respondent Demographic of Age</td>
<td>35</td>
</tr>
<tr>
<td>4.4</td>
<td>Respondent Demographic of Level Education</td>
<td>36</td>
</tr>
<tr>
<td>4.5</td>
<td>Respondent Demographic of Experience in Information System</td>
<td>37</td>
</tr>
</tbody>
</table>
LIST OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Questionnaire</td>
<td>66-69</td>
</tr>
<tr>
<td>B</td>
<td>Table of Critical values for student’s t distribution</td>
<td>70</td>
</tr>
<tr>
<td>C</td>
<td>Gantt Chart</td>
<td>71</td>
</tr>
<tr>
<td>D</td>
<td>SPSS</td>
<td>72-89</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

1.1 Background of The Study

The academic field of Information Systems (IS) first attracted research interest in the 1960s together with the emergence of applied computer science which in turn aimed at the design and implementation of data processing applications (Argyropoulou, 2013). Information Systems (IS) are systems that provide information service and must receive information and store, access, transform, transfer and process information so as to produce the desired information service. The use of the technology has advanced from the automation of structured processes to systems that are truly revolutionary in that they introduce change into fundamental business procedures, work flow and the management of an organization (Md Nor Ridzuan Daud & Amirrudin Kamsin, 2004).

An information system is a set of interrelated components that work together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and visualization in an organization. Using information systems effectively requires an understanding of the organization, management, and information technology shaping the systems. An information system creates value for the
firm as an organizational and management solution to challenges posed by the environment. Information systems development and usage involves organization, management, and technology dimensions. It is important to understand who will use the information systems and how the information systems will be used to facilitate decision making and control within the organization. With information system existence it ensures improved decision making, operational excellence, and competitive advantage, customer and supplier intimacy and total overall organizational survival. Information systems may help managers and workers analyze problems, visualize complex subjects, and create new products.

Employees’ performance as one of the most important steps to ensure the success of an information system. Follow for IS component, there is a significant changes occur in information technology, especially with the high intensity growth of the internet. Overall, the researcher has started to develop standardized measures that can be used to evaluate the various dimension of IS success as indicate by D&M model. The past research has helped to open the researcher view for a better understanding on IS success, but more needs to be done.

In reality today, information systems affect a much larger part of the organization itself, such as organizational products, objectives, and structure. Powerful computers, software, and networks, including the internet, have helped organizations become more flexible at all levels involve the use of information systems. There is a growing interdependence between the organization and its information systems.

### 1.1.1 Management Information System (MIS)

Management Information systems plays a major role to coordinate activities within manufacturing industry. Hence information systems can connect manufacturing
industry, their customers, suppliers and service providers. In order to operate better in rapidly changing and competitive market information systems should be integrated.

1.2 Problem of Statement

Information System is important for an organization, as it helps organizations ensuring employees are working hard to contribute to achieving the organization’s mission and objectives. The Information System help to provide the necessary information to make decisions with the effectiveness and efficiency, and as far as accuracy, comprehensiveness and timeliness in the providing information increase the efficiency of those decisions, which leads to improved performance (Al Tai, 2005). Employee performance could be expected, assessed and encouraged. According to Macky and Johnson (2000) pressed that the importance of IS success improving organizational performance and this is achieved by improved individual employee performance. Therefore, improving employee performance by using IS success is a way to improve organizational performance. So in this research, the researcher investigates the relationship between impact of IS success towards employees’ performance.

SAP software system are having been use in Continental’s Management since 2014. After they using SAP software, it shows a drastically change the organizational performance of Continental. For example, Human Resources Management, it changing in the aspect of the use of media electronic. The previous HR Department need to use banner and newspaper to advertise the recruitment of employee. They also need to go through the local labor offices to advertise the recruitment of employee for the company. Currently, they only need to use online to advertise and have the online interview for the recruitment. For the production department, before SAP was established in Continental all the information required by each department cannot be reach because have a lot barrier between others department especially when to get data information. Before this it difficult to check each section whether enough manpower to run production and so on. This research, therefore to investigate the impact of IS success towards employees’ performance at Continental Tire PJ, Selangor.
1.3 Research Question

The research questions relate to the impact of IS success towards employees’ performance at Continental Tire PJ, Selangor. These are questions that constructs as follows:

1. What is the relationship between IS success towards employees’ performance at Continental? 
2. What is the impact of IS success towards employees’ performance at Continental? 
3. What is the most impact of IS success towards employees’ performance at Continental?

1.4 Research Objective

Important Objectives of the study are stated as follows:

1. To investigate the relationship between IS success towards employees’ performance at Continental.
2. To analyze the impact of IS success towards employees’ performance at Continental.
3. To identify most impact of IS success towards employees’ performance at Continental.
1.5 Scope and Significance of The Study.

The reason of this research study is to know about the impact of IS success towards employees’ performance at Continental. Nowadays, every one know that the importance of information system for organization. This system has increased the overall departments performance of the organization as the system link with other accounts offices such as treasury offices where all the record of funds, balance sheet, history services certificates, payslips, employees separate records can easily now traced. But the main obstacle in the way is the old staff because the old staff are apposed to this new system, they did not know the basic know how and they are not familiar to this this new system because they are using that traditionally old manual system of recording and posting of transactions, but government now providing training to all old staff and new ones to cope by utilizing this new technology.

1.6 Limitation And Key Assumptions of The Study

In the process to completing this study, the researcher has met some limitations. The researcher just focusing at Continental Tire PJ only and Continental is a big company, so the researcher is lack of experience on how to conduct the surveying and collect the data and the researcher has to go to the company to get full cooperation from the respondents at the company. Other than that, the researcher assume that the respondent provide the honest answer even though the answer not related in the field of information system. Moreover, the researcher assume that the respondent has educate knowledge to be apart of primary data collection. Last but not least, the researcher assume that the respondents has more experience in handling with matters related to the impact of IS success towards employees performance at Continental when he or she can provide justifiable answers.
### 1.7 Structure of Thesis

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>BRIEF DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>This chapter is mainly discuss about the basic concept of the study, background of the study, problem statement, the research objectives and research questions</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>This chapter is describing about the definition of the topic and reviewing the related theories along with the past studies about the topic. The researcher will build the theoretical framework.</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>The researcher will explain the research methods which will be used in conducting the research</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>This chapter will concentrate on data analysis and involves the interpretation of the data and the testing of the hypotheses. Also begin with the preliminary analysis which involves descriptive statistic, tests to ensure that the assumptions of linearity and normality are accurate and a factor analysis will also be conducted.</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>This chapter will discuss on the discussion of all the result of the study.</td>
</tr>
</tbody>
</table>

### 1.8 Summary

This chapter is about the development of the framework for the research. The framework acts as guidelines for the researcher to ensure the research align with the objectives of the research. It includes basic information about the research such as introduction of information system (IS) and the impact of IS success towards employees’ performance. Moreover, the purpose of doing the research and the expected outcome are also discussed in this chapter. Last but not least, this chapter covers the scope of the research.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter introduced the problem statement, the research questions and the research objectives that this study attempts to address. In this section, the researcher provides the whole of the study describing the literature as a main source. This section also consists of the relevant statement, and related written sources such as journals, articles and internet sources by a lot of philosophies that support the research in strengthening arguments given. It is very important to the researcher to emphasize and assert the topic in order to come up with solid and strong evidence unhesitatingly. Lastly, the information that was obtained from various reference sources that can be used to strengthen the understanding of theoretical framework.
2.2 Definition of Terms

2.2.1 Information System (IS)

An information system (IS) is the application of computing and communication technology to the challenges that face business in the emerging and strengthening global economy. Ultimately, an information system (IS) exists to help an organization accomplish its objectives. An information system (IS) takes raw facts, known as data, and integrates, manipulates, compiles and disintegrates that data into something that has meaning for a manager or operator. An information system (IS) should provide guidance to the organization's employee to better assist them in the accomplishment of those objectives. IS impact all levels of the organization like operational, tactical, and strategic.

Operational performance from the IS perspective focused on several areas including sales, production lead-time, inventory turnover and cost, utilization of the available capacity, employee turnover. Performance measures are usually divide into two main groups, financial measures and non-financial measures. Financial measures based on the economic state of a company, incorporate traditional measures (like profits, revenues, costs, financial margins, cash flow) and other more recent measures such as Economic Value Added (EVA), Cash Flow Return on Investment (CFROI) etc. While, non-financial measures aim at quantifying the organizational performance in relation with: customer satisfaction-retention-acquisition), employees (e.g. employee satisfaction), innovation, quality, culture. etc. (Argyropoulou, 2013).

2.2.2 Management Information System (MIS)

MIS stands for management information system, which define as the development and use of information system that help business goals and objective. This definition has three key elements development and use, information system, and business goals and
objective (Kroenke, 2011). A system is a group of component that interact to produce information, an information system (IS) is a group of component that interact to produce information. A model of the components of an information system such as computer hardware, software, data, procedures and people (Kroenke, 2011).

2.3 Key Impact IS Success Towards Employees’ Performance

2.3.1 System Quality

System quality represents the quality of the information system processing itself, which includes software and data components, and it is a measure of the extent to which the system is technically sound (Gorla, Somers, & Wong, 2010a). Seddon (1997) stated that in his study that system quality is concerned with whether there are bugs in the system, the consistency of user interface, ease of use, quality of documentation, and sometimes, quality and maintainability of program code. System quality is measured by attributes as ease of use, functionality, reliability, data quality, flexibility, and integration (DeLone and McLean, 2003).

2.3.2 Information Quality

The researcher focused on measuring the quality of the basic system output, mainly the report. From the previous studies, different kinds of information systems are developed for different purposes, depending on the need of the business. Each plays a different role in organizational hierarchy and management operations (Al-mamary, Shamsuddin, & Aziati, 2014). Several report have shown that organizational impact is the
effect of information system on employees’ performance. These results are consistent with data obtained in (Hailu, 2014).

Information systems processing is similar to production processing in manufacturing organizations. Moreover, if the information not delivered on time it does not conform to the needs of users, the users will be not satisfied and the company will lose its clients (Gorla, Somers, & Wong, 2010b). On the other hand, high information quality in terms of information content accuracy, completeness, relevance to decision making that will lead to high organizational performance impact of management information system support in anticipating customer needs and internal organizational efficiency in high-quality decision making.

2.3.3 Service Quality

Definitions of service quality hold that this is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (Lehtinen, 1982). Service quality is defined as the degree of discrepancy between customer’s normative expectation for service and their perceptions of service performance. The definition of service quality was further developed as the overall evaluation of a service firm that results from comparing that firm’s performance with the customer’s general expectations of how firms in that industry should perform (Parasuraman et al. 1998).

2.3.4 User Satisfaction

In this research, user satisfaction measures were in general satisfied with the environment and enjoyable experience when using it and in overall it was a success. When the use of an information system is required, the preceding measures become less useful; and successful interaction by management with the information system can be measured
in terms of user satisfaction. Several I/S researchers have suggested user satisfaction as a success measure for their empirical I/S research (EinDor and Segev 1978; Hamilton and Chervany 1981).

### 2.3.5 Employees’ Performance

Organisational performance is assign of the capacity of a company to efficiently achieve independent goals (Venkatraman & Ramanujam, 1986). One of the elements that is assessable is the employees’ performance through the level of their productivity. Several researchers have been introducing various methods to evaluate organisational performance.

### 2.4 Theory D&M Model

![Figure 2.4: The DeLone and McLean Model (1992)](image)

It was in 1992 when DeLone and McLean (1992) identified more than 100 criteria/measures that had been used in some 180 studies at the time. The authors presented the interrelationships between six IS implementation variables that could be used as ‘success measures’. Ever since the appearance of these measures, most authors used the term success for the evaluation of information systems. In this section it is used to provide an