

UNIVERSITI TEKNOLOGI MARA

**FACTORS INFLUENCING CLOUD COMPUTING
ADOPTION IN GOVERNMENT AGENCY**

ZURINA BINTI JUSOH

Report submitted in partial fulfillment of the requirements
for the degree of

Master of Science (Information Technology)

Faculty of Computer and Mathematical Sciences

July 2014

ABSTRACT

Cloud Computing is the latest trending of information technology. Cloud Computing is a computer technology that allowing a user to share information and an organization can have a benefit of powerful computer infrastructure to reduce cost to pay capital cost like hardware and software. The employees in organization can access the data from everywhere, information and application on Cloud Computing through internet. The objectives of this study are to identify what type services of cloud that have been used by the government agency. This study will also highlight (or examine) on the factors influencing in adopting Cloud Computing from environmental and organizational factors, complexity factors, compatibility factors, security and privacy factors, trial ability and cost factors in government agency to see all the factors can adopt in government agency. This study use questionnaires to find the factors that adopt Cloud Computing in government agency. For analysis this study makes content analysis descriptive, frequencies, and Pearson correlation coefficient for validity techniques. This study is using quantitative and qualitative methodology. The finding of type of cloud service is Software as a Service (SaaS) and factors influencing for Cloud Computing adoption in government agency are trial ability and cost factors. This findings hope can give information the Cloud Computing adoption in an organization.

Keywords: –Cloud Computing, Cloud Adopt, Government agency

ACKNOWLEDGEMENT

In the name of Allah, the Most Merciful and Most Compassionate.

Alhamdulillah and peace be upon Prophet Muhammad S.A.W., this thesis is finally completed with achievable objectives. Thanks to Allah S.W.T with HIS bless and consent, I am able to complete this study successfully. I would like to express my sincere thanks and appreciation to all who have supported and contributed to this report. I would like to thank the following for their support:

Firstly, I would like to thank my supervisor Puan Rozianawaty binti Osman, who have been spent their time, patience, dedications, and also for their guidance in completing this report. Also my gratitude to the IT project (SYS789) coordinator, Jasber Kaur A/P Gian Singh.

The warmest support that provided by my family especially my parents Encik Jusoh bin Abdullah and Puan Zaliha binti Kasim, my beloved husband Encik Ahmad Marzuki bin Mohamed, my daughter Zulaikha and my siblings is highly appreciate and could not have been started and successful completed without their inspire. Thanks a lot for your support, guidance, sponsorship, and also understanding. Everything you have being done is requisite in completing and finishing this job. To my friends that teach me about SPSS Puan Juliana binti Yahya and Cik Rosaizan Haryani Rosli, thank you a lot.

Last but not least, I would like to thanks to all of my friends and all other parties or individual who are not mentioned here.

May Allah bless all of us.

TABLE OF CONTENTS

STUDENT’S DECLARATION	i
ABSTRACT	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Research Background	3
1.3 Problem Statement	4
1.4 Research Question.....	4
1.5 Research Objectives.....	5
1.6 Research Scope.....	5
1.7 Research Significance.....	5
CHAPTER 2 LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Cloud Computing.....	6
2.3 Internet vs. Cloud Computing	8
2.4 Characteristics	8
2.5 Types of Cloud Computing Services	10
2.6 Deployment Models of the Cloud	12
2.7 Factors be envisaged in Cloud Computing Adoption in Government Agency.....	20
2.8 Summary.....	25
CHAPTER 3 RESEARCH METHODOLOGY	26
3.1 Research Methodology	26
3.2 Planning	27
3.3 Data Collection	27
3.3.1 Primary Data.....	27
3.3.2 Secondary Data.....	29

3.3.3 Respondent’s Information	29
3.3.4 Data Measurement	30
3.4 Data Analysis	30
3.4.1 Frequency and Descriptive Analysis.....	31
3.4.2 Pearson Correlation Coefficient for Validity.....	32
3.5 Summary	33
CHAPTER 4 DATA ANALYSIS AND RESULT	34
4.1 Introduction	34
4.2 Respondents’ Information	34
4.2.1 Respondent’s Innovativeness	35
4.2.2 Respondent’s Cloud Knowledge.....	37
4.2.3 Respondent’s Source Information about Cloud Computing	38
4.3 Cloud Model.....	39
4.4 Type of Cloud Service	43
4.5 Factors Influencing Cloud Computing Adoption.....	44
4.5.1 Environmental Factors.....	44
4.5.2 Organizational Factors.....	45
4.5.3 Complexity Factors.....	46
4.5.4 Compatibility Factors	47
4.5.5 Security and Privacy Factors.....	47
4.5.6 Trial ability Factors.....	48
4.5.7 Cost Factors.....	49
4.6 Summary.....	49
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS	51
5.1 Introduction	51
5.2 Limitation of the Study	51
5.2.1 Limited Number of Respondents to obtain Data Collection.....	51
5.2.2 Skill and Experience Limitation	51
5.3 Recommendations for Future Works	52
5.4 Conclusions	53
REFERENCES	55
APPENDIX.....	59
Appendix A: Survey Questionnaire.....	60