CHAPTER 5 : CONCLUSION, DISCUSSION AND RECOMMENDATION

5.0 INTRODUCTION

This chapter begins with the summary of the findings from this study. Then, it discusses the limitations of the study. Theoretical and practical implications will be presented then, followed by the recommendations for future research directions.

5.1 SUMMARY OF RESEARCH RESULTS

Demographically, the distribution of the gender is almost fairly distributed, 51% (54) were Male respondents and 49% (51) were Female.

The Ethnicity, is however not fairly distributed. From the respondents, the ethnic Malay is the highest, whom contributed 81% (85) to this questionnaire, followed by Chinese, contributed an 11% (12), Indian and Bumiputra, each contributed 3% (3 and 3) and other Ethnic, which is Iranian contributed a 2% (2). A total of 105 respondents data is analysed.

The age of the respondents varies, but most respondents are from the age less than 35, which is 69% (72), 19% (20) is from age band 36 to 45, 11% (12) is from the age band 46 to 55 and 1% (1) is 56 year old and above. A total of 105 respondents data is analysed.

The respondents' Level of Education, ranges from having a Master Degree and PhD to SPM/ MCE and below holders. The biggest contributor is from the Degree and Master degree and PhD holders, each group is 46% (48 and 48), followed by the

Diploma and Certificate holder, 5% (6) and the SPM/ MCE holder, which contributed a 3% (3).

Pursuant to the demographics information, I have further analysed factors that could help explain the individual intent to adopt Cloud Computing. Based on the result, all variables do influence individual intent to adopt the Cloud Computing. In ranking based on strength of influence results, the variables supporting the theories are :

i. Perceived Ease of Use (PEU);
ii. Trialability (TR);
iii. Perceived Usefulness (PU); and
iv. Compatibility (CP).

For this study, one hundred and six (106) data were tested and analysed which result were presented in Chapter 4. Herewith within, I discussed the findings relative to the variables, Perceived Ease of Use (PEU), Trialability (TR), Perceived Usefulness (PU) and Compatibility (CP).

Although Yoon, T.. (2009), in his study on An Empirical Investigation of Factors Affecting Organizational Adoption of Virtual Worlds, found out that the variable Relative Advantage and Compatibility are the most common variables to be significant that positively influence organizational adoption. Relative advantage can be regarded as user subjective evaluations about a particular information technology or system relative to another. However, due to the reason that this Cloud Computing study is not comparing with another system, the factor is dropped.

Excluding the one unreliable variable, the Cloud Trust, surprisingly, all of these four (4) factors were found to have significant influence on organisational intent to adopt Cloud Computing. These findings were consistent with the theories-bases in this study, that are the TAM (Davis., 1989) and (IDT) (Rogers, 1983;1995).

Perceived Ease of Use (PEU) is found to be the most significant factor in influencing and determining factor to adopt Cloud Computing, in this case, with Beta (β) equals to 0.36 (p= 0.000, p<=0.05). This is very much consistent with the theory, TAM. Consistency is also found with prior researches, with Davis (1989), Igbaria et al. (1997) and Teo, (2001) that perceived ease of use is a dominant factor in explaining intention to adopt. In this study, ease of use is the most important factor.

Trialability is the second significant factor in influencing and determining factor to adopt Cloud Computing, with (β) is 0.32 (p= 0.000, p<=0.05). This result is also very much in consistency with the theory IDT.

Perceived usefulness is positively influencing the adoption of IT, was based on the assumption that the more useful the potential user perceived the system; the more likely it is that the user could adopt using the system. This study supported this hypothesis and is similar to Davis et al. (1989), Igbaria et al., (1995) and Nelson and Jantan (2003) that perceived usefulness are positively related to usage.

Compatibility, although having least strength in the relationship, but supporting the theory, that is, by having a positive relationship with the intention to adopt the Cloud Computing. This variable in this study is consistent with the

Hebron (2008)'s Cloud Trust variable is not supported, probably due to the reasons that :

i. The variable is not based on a concrete theory but from a previous study on Wireless Technology Adoption (Hebron, 2008). The measures used in the previous study might not capture perceived security concern within Cloud Computing.

ii. The variable did not use all of the questions as used by Hebron (2008), but used only a few of the questionnaires that were used in Hebron's.

iii. The questions used contains reversed questions, thus may be resulting in **response bias** from the respondents.

However, this situation is in consistency with prior studies by Zhu et al., 2006b and Vadapalli and Ramamurthy, 1997 – 1998 which found that the security concerns negatively influence the post adoption phase of the internet-based technologies (i.e. assimilation). Future studies are suggested to examine the effects of security concerns during the post-adoption stages of Cloud Computing.

5.2 LIMITATIONS OF THIS STUDY

A few limitations were identified during conducting this study. These are shared below :

- Reaching to the sample

  The sample is collected based on snowballing technique, that is, through friends, relatives, neighbours and working friends, although nation-wide which may still give a not so wide-reaching to the general public as a whole. Thus, perhaps the ability to generalise is somewhat limited to some extent. However, the samples are valid due to the reason that the respondents are assumed to understand what Cloud Computing is. Future studies, then, could then, improve this by collecting samples from the general public as a whole – from internet users, of course.

- Time

  Obviously the time is an essence. Although the time given is two (2) semesters for completing the project, but due to the requirement of both work and study, time ha become a real limitation. Many of the good-to-have analysis and tests were less prioritised than to the most applicable and related due to this time constraint.

- Limited knowledge on research and analysis technique

  Limited knowledge on the analysis techniques and the analysis software is also another challenge. However, there is tremendous experience in learning to perform this data analysis. It is indeed a new subject matter to the researcher, requires effort to learn hence have given a new learning experience to the researcher.

5.3 THEORETICAL IMPLICATIONS

This study also has several theoretical implications, including :

- Provides better understanding and extending the tests of the TAM and IDT theories in individual adoption of Cloud Computing by the internet users in Malaysia. Consequently, the theories are well supported.
- As mentioned in Chapter 2, there are very little studies done on Cloud Computing in Malaysia, whether it is organisation-wide or individual. Most prior studies on Cloud Computing were conceptual. However, this study helps explain empirically using the underlying theories of TAM and IDT, on the individual intent to adopt Cloud Computing among internet users in Malaysia. To the best of my knowledge, this study is the first empirical study to examine the factors important to the adoption of Cloud Computing in Malaysia, excluding the non-published studies unfound in the libraries' databases. There are however, attempts to pursue research grants on Cloud Computing in Malaysia, by the local universities.
- An extension of TAM and IDT is now made available for further studies in the Cloud Computing area.

5.4 PRACTICAL IMPLICATIONS

- This study provides empirical evidence that there are factors that marketers (including in the service providers space) could look into in determining the offerings and promotions to their target market. Marketers should include trialability and perceived ease of use in their product offering and promotions.
- The implications to managers suggest that in designing the services for individuals, there are several criteria that can be looked into i.e. the variables influencing the intention to adopt the Cloud Computing.
- In the academic space, where this study enhances and extend knowledge in the area of technology adoption for Cloud Computing. Especially in this country as well as this region, where academic studies in Cloud Computing is very new and empirical studies are very rare or none.
- Implications are also created in the area of market research, where a new relationship is validated and be adopted in the future market research on Cloud Computing
- Marketing and Packaging, in the area of identifying the best demographics to target for a certain criteria of the Cloud Computing offering.
- To service providers and its users, this could be the guideline in its offerings as well as in choosing the best Cloud providers and services in the market.

5.5 SUGGESTIONS FOR FUTURE RESEARCH

- It would very interesting to do a thorough exploratory research on Cloud Trust, to address the security concern and determine the variables associated to it. This is important to determine the right construct as the tool to measure Cloud Trust.
- Another area of improvement to this study is to use a larger sample size, to overcome the problem associated with relatively small sample size, that is Reliability, to represent the total population for generalisation purposes.
- As this study has focused on the intention to adopt the Cloud Computing, it would also be interesting to study the different effects of the variables in this study on actual adoption behaviour.
- A study in organisational context could also be performed, in enhancing the effectiveness of future studies, as this study is done based on individual adoption to Cloud Computing.
- To retest this model in another sample, to confirm generalisation to it.
- This study could also be extended to a different geographic area, to confirm if the behaviour of adoption to Cloud Computing is similar to the internet users in Malaysia and other parts of the world
- Future studies could as well be tested in an environment before and after effect of certain variable being controlled in a longitudinal study.

5.6 CHAPTER SUMMARY

Based on the underlying TAM and IDT theories, I have proposed a research model for individual adoption of Cloud Computing. The model included five (5) factors and tested using 106 data. Surprisingly, all variables tested, are consistent to the theories referred beautifully, except for the Cloud Trust factor, which is not tested due to the reason that the construct does not show that it is reliable to be used for further testing and analysis.

There are theoretical and practical implications by the result of the analysis. Theoretically, the study has proofed that the TAM and IDT, being the underlying technology adoption theories are both supported. Secondly, this study provides extension to knowledge in the technology adoption space. Thirdly, this study provides a better understanding of Cloud Computing adoption in Malaysia which is an important gateway to more and better research and implications.

Practically, it provides the marketers the criteria of the product and the services that best influence the adoption of Cloud Computing. This would further give the marketers the space to best design and promote the services.