

Information Technology Acceptance: From Perspective of Malaysian Bankers

Zarehan Selamat (Corresponding author)

Faculty of Management, Multimedia University

63100 Cyberjaya, Selangor, Malaysia

Tel: 60-3-8312-5667 E-mail: zarehan.selamat@mmu.edu.my

Nahariah Jaffar

Faculty of Management, Multimedia University

63100 Cyberjaya, Selangor, Malaysia

Tel: 60-3-8312-5678 E-mail: nahariah.jaffar@mmu.edu.my

Abstract

This study examines the adoption and acceptance of information technology from the perspective of Malaysian bankers. The results of the study indicate that majority of Malaysian bankers heavily used computer for routine jobs such as paper work and data maintenance but rarely use the computer for advance functions such as business analysis, planning and decision making. Malaysian bankers also rarely used professional software for specific purposes such as statistical analysis or programming languages. The regression result of this study appeared to suggest that perceived usefulness, management support and external computing support were found to be the most influential factors in determining microcomputer usage among bankers in Malaysia. Overall, the results of this study are valuable to both researchers and bank management in providing new insights about the IT from bankers' point of view.

Keywords: Information Technology (IT), Banking, Technology acceptance, Malaysia

1. Introduction

Information system (IS) is a continuously growing phenomenon. One of the main streams of research in the IS field is the explanation and prediction of Information technology (IT) adoption and usage. According to Agarwal (1999) acquiring appropriate IT is a necessary but not sufficient condition for utilizing it effectively. Therefore, it has been noted that users' attitudes towards and acceptance of a new information system have a critical impact on successful information system adoption (Davis, 1989; Venkatesh and Davis, 1996; Succi and Walter, 1999). Although such acceptance has received fairly extensive attention from prior research, the literature still suggests the additional efforts and need for advancing understanding of the key factors experienced mainly those involving different contexts, technologies and user populations. Furthermore since the user's perception and intention can change over time, it is important to measure these quantities at several point of time.

The objective of this study is to investigate the adoption and determinants that influence IT acceptance by Malaysian bankers. Specifically, we will examine the extent to which bankers adopt IT, IT usage, and the underlying factors that affect banker's acceptance of IT. To achieve this objective, we employed technology acceptance model (TAM) and modified it to reflect the Malaysian banking context. In general, TAM was one of a number of studies that have helped in providing theoretical frameworks for research in the adoption of information technology and information systems over the last two decade and has been used extensively as the basis of a range of empirical studies. Such a research will help IT vendors and external consultants a better understanding of IT usage pattern of Malaysian bankers and contribute to the field of knowledge on IT awareness and usage among Malaysian bankers.

The remainder of the paper has been organized as follows. The next section of this paper review related literatures, followed by a discussion on the methodology employed and empirical findings. Finally, conclusions, some limitations and implications for further research are outlined.

2. Literature Review

2.1 TAM: Perceived Usefulness (PU) and Perceived Ease of Use

In studying user acceptance and use of technology, the TAM is one of the most utilized and referenced models for research in the adoption of information technology and information systems (Venkatesh, 1999). Indeed, TAM has proven to be a parsimonious model that explains much of the variance in users' behavioral intention related to IT adoption and usage across a wide variety of context (Taylor and Todd., 1995). TAM has its roots in the theory of reasoned action (TRA) which explains individuals' behaviour on the basis of factors such as beliefs and intentions (Ortega et al., 2006). Davis introduced TAM (figure 1) as an adaptation of TRA, specifically designed to explain computer usage behaviour in organisations. Technology acceptance model (TAM) suggests that perceived usefulness (PU) and perceived ease of use (PEoU) of IT drive users' attitudes and intentions to adopt that technology (Davis 1989). PU is defines as the degree to which a person believes that use of technology will produce better outcomes (Davis, 1989). 'Useful' refers to 'capable of being used advantageously'. In contrast, PEoU is referring to the perception about the degree of effort needed to use a particular system (Davis, 1989). In this case, 'ease' is conceptualized as 'freedom from difficulty or great effort.' In general, if a system is easy to use, it requires less effort on the part of users, thereby increasing the likelihood of adoption and usage. Conversely, if systems that are complex or difficult to use are less likely to be adopted, since it requires significant effort and interest on the part of the user (Teo, 2001). 'Attitude' towards the behavior refers to an individual's feelings or emotions about using the technology, whereas "intention to use" was understood in terms of the likelihood that an individual would use the technology in the future (Lympelopoulos and Chaniotakis, 2005).

2.2 Social Pressure

Social Pressure is defined as the degree to which an individual perceives that important others believe he or she should use the new system for obtaining a higher social status or a more important position in their organization. The study of microcomputer usage by Igbaria (1993) reports that social norms have significant effects on system usage. Rogers (1995; 1986) also indicates the importance of social norms on the rate of the diffusion of innovations. Furthermore, social norm has been found to be more important in the early stages of system development (Hartwick & Barki, 1994). In a separate study, Igbaria et al. (1996) showed social pressure to be positively related to IT usage.

2.3 Perceived Enjoyment and Fun

Perceived enjoyment and fun means that individuals that themselves experience immediate pleasure and fun from using the machine and perceived any activity involving using the computer to be enjoyable in its own right (Davis et al, 1992). A number of studies on perceived enjoyment (Davis et al., 1992; Igbaria et al., 1995; Teo et al., 1999) have noticed that perceived enjoyment significantly affects intentions to use computers. Igbaria et al., (1995) studied the effect of perceived enjoyment and usefulness on usage in a field study of Finnish computer users. They found strong relationships between perceived usefulness and usage, but weak, insignificant links between enjoyment and usage. In contrast, Teo et al. (1999) noted that perceived enjoyment correlates positively with frequency of Internet usage and daily Internet usage. They explained that perceived fun and perceived playfulness are similar to the concept of perceived enjoyment. In this study, these terms are handled the same and used interchangeably.

2.4 Perceived Complexity

Perceived Complexity is defined as the degree to which an innovation is perceived as relatively difficult to understand and use (Rogers and Shoemaker, 1971). Rogers and Shoemaker (1971) suggests that the complexity of an innovation, as perceived by members of a social system, is negatively related to its rate of adoption. Another study was made by Al-Gahtani (2003) who had investigated how perceived attributes of computer technology influence its rate of adoption in the workplace in Saudi Arabia. In order to achieve this, five attributes of innovations namely relative advantage, compatibility, complexity, trialability and observability are investigated in relation to computer technology adoption and use. The findings found that each attributes was hypothesized to positively correlate significantly with computer adoption and use, except complexity. Complexity as a negative attribute was hypothesized to negatively correlate with computer adoption and use. Meanwhile, the study done by Chau and Hu (2001) found that the more complex the technology, the less relevant experience and subsequently a weaker link exists between perceived usefulness and behavioral intention to use.

2.5 Internal Personal Computing Support

Internal Personal Computing Support is referred to the technical support provided by individuals or groups with computer knowledge internal to the company (Venkatesh and Davis, 2000). Igbaria et. al (1997) study on the factors affecting personal computer acceptance in small firms. The result indicate that the intra-organizational (internal computing support and training, and management support) and extra-organizational (external computing support and training) variables were hypothesized to influence adoption.

2.6 Management Support

Management Support is referred to the perceived level of general support offered by top management (Venkatesh and Davis, 2000). Igbaria (1995) found that there is a relationship between management support and perceived usefulness. According to Igbaria et al (1997), management support is able to ensure sufficient allocation of resources and act as a change agent to create a more conducive environment for IT success. Lack of organizational support is noted to adversely affect effective utilization of computers (Davis, 1989, Fornell, 1982).

2.7 External Personal Computing Support

External Personal Computing Support is referred to the availability of technical support provided by friends, vendors, consultants or educational institution external to the company that promotes the adoption of IT. Study done by Gable (1991) found that the experience and capabilities of the consultants plays an important role in information system success.

3. Research Model and Hypotheses

According to Venkatesh and Davis (2000), although the TAM serves as a prevalent explanation of attitude, intentions, and actual use of new systems, it may be too parsimonious, which implies it should be supplemented and extended with other constructs. Therefore, this study integrates the primary constructs of TAM (perceived usefulness and perceived ease of use) with other constructs to predict the bankers' attitude toward information technology such as social pressure, perceived enjoyment and funds, perceived complexity, internal personal computing support, management support and external computing support to the TAM. The research model examined in this study is illustrated in figure 2.

The research model illustrated in figure 2 shows the relationship between the dependent and independent variables. Bankers computing acceptance is the dependent variable in this research. Meanwhile, the independent variable in this research is bankers' perception drivers. The model suggests that the dependable variable (banker acceptance of new technology) is affected directly and/or indirectly by: (1) perceived usefulness; (2) perceived ease of use; (3) social pressure (4) perceived enjoyment and (5) perceived complexity; (6) management support; (7) intra organizational factors: internal personal computing support and (8) extra organizational factors: external personal computing support.

From the previous study we proposed the following hypothesis to reflect the research model:

H1: Perceived usefulness has a direct effect on personal technology acceptance.

H2: Perceived ease of use has a direct effect on personal computing acceptance

H3: Social pressure has a direct effect on personal computing acceptance.

H4: Perceived enjoyment and fun has a direct effect on personal computing acceptance

H5: Perceived complexity has a direct effect on personal computing acceptance.

H6: Internal computing support has a direct effect on personal computing acceptance

H7: Management support has a direct effect on personal computing acceptance.

H8: External computing support has a direct effect on personal computing acceptance.

4. Methodology

4.1 Research Instrument

Primary data were collected by means of a questionnaire that was especially developed for this study. The questionnaire was developed and piloted before distribution in order to validate the content of questionnaire in terms of validity, logic and accuracy. The final version of the questionnaire consisted of two parts. The first part of the questionnaire was designed to identify the demographic characteristic of the respondents such as gender, age, income and occupation. The second part contains a series of questions about the perceived usefulness, perceived ease of use, usage, social pressure, perceived enjoyment and fun, perceived complexity, management

support, internal computing support and external computing support.

Individuals were asked to indicate the extent of agreement or disagreement with various statements concerning IT acceptance on a five-point Likert type scale ranging from (1) "strongly disagree" to (5) "strongly agree" for perceived usefulness, perceived ease of use, social pressure, perceived enjoyment and fun and perceived complexity. To measure management support, internal computing supports and external computing supports, a five-point scale ranging from (1) "never" to (5) "to a very great extent" was utilised.

In the study, IT usage was measured in terms of current usage or actual usage behaviour of bankers. The questionnaire listed ten different types of software applications such as spreadsheets, word processing, database, statistical analysis, internet, electronic mail, programming languages, graphics, application packages and power point (Igbaria et. al, 1989). Individuals were asked to indicate the amount of time spent on computer per day using a six point scale ranging from (1) "almost never" to (6) "more than 3 hours per day". Frequency of use, which has been used by Igbaria et al (1989), provided a better indicator of the extensiveness of usage than measure of time spent. Frequency of use was measured on a six point scale ranging from (1) "less than once a month" to (6) "several times a day"

4.2 Respondents

A total number of 200 survey questionnaires was developed and distributed to bankers' deployment located in Klang Valley area. This location was selected in view of its advancement and development of IT implementation as compared with other locations in the country. Questionnaires are distributed via drop-off-method (i.e. hand delivery of self-administered questionnaires, followed by personal collection). Consequently, the respondents were also given the choice to take away the questionnaire and complete it in their own leisure time and space. Respondents who chose to return the form at a later date were provided with a pre-addressed pre-stamped envelope. Of the two hundred survey questionnaires that were distributed, seventy four responses were received (a response rate of 37%). However, after going through a data cleaning process, eliminating those surveys with many missing values and inconsistent responses, only a total of 69 forms being available for analysis (a net response rate of 35%). The final data inputs were loaded into a statistical package (SPSS 17.0) for doing various statistical analyses.

5. Data Analysis and Findings

5.1 Descriptive Statistics and Demographics Profile

The descriptive analysis is the preliminary step leading to an understanding of the collected data. It provides descriptive information of data collected such as frequency, the mean and standard deviation of the respondent's demographic information. The detailed sample profile in terms of gender, age, marital status, education, profession and annual income is depicted in Table 1.

Frequency distribution of the respondents showed that of 47.8% (33) of the respondents were male and 52.2% (36) were female. In terms of age, 15 % of the respondents were 25 years and less. Another 76.8% were between the ages of 26 to 45 years old. Only 7.2% of the respondents exceed the age 45. With respect to the level of education, respondents were primarily people with tertiary education. The professions that were most common among respondents were clerical and officer, together making up 73.9 percent of the surveyed sample. The majority of the respondents (40.6%) income falls in the range of more than RM 36,000. The frequency of more than RM 36,000 is attributed to the fact that most of the respondents were officer.

Table 2 lists the job tasks that the respondents most often used a computer for, the most frequently used software and frequency use. The highest use job task was producing report, followed by letters and memo and data storage. The computer software used order was word processing, spreadsheets and electronic mail. The result indicates that the majority of end users managed routine jobs such as paper work and data maintenance. The system heavily used is word processing (81.2%) and spreadsheet (68.1) and programming language is the least system used (5.8%). This implies that bankers in Malaysia do not use the computer for advance functions such as business analysis, planning, decision making and so on. Malaysian bankers also rarely used professional software for specific purposes such as statistical analysis or programming languages. Regarding the frequency used, 88.4% of the respondents used a computer several times a day and 81.4% of respondents used it more than 3 hours per day.

There are two standards for statistics to judge whether the data could be analyzed by factors analysis: Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were checked for appropriateness of factor analysis (Hair et al. 2006). Both showed satisfactory results. The Bartlett's test indicates nonzero correlation existed at the level of significant less than 1%. (approx chi square: 2386.95) which

suggests factor analysis is an applicable method for classifying the acceptance of IT items. As for KMO (0.797), the reduced set of variables collectively meets the necessary threshold of sampling adequacy of more than the acceptable MSA value of 0.50. That is to say that the coefficient of all variables is significantly correlated, indicating feasibility of conducting factor analysis.

5.2 Reliability analysis

In order to have robust findings, the scales used to measure variables should be reliable. The reliability of measures refers to its stability over a variety of conditions (Nunnally and Bernstein, 1994). Reliability is used to measure the extent to which an item, scale or instrument will yield the same score when administered in different times, locations or populations when the two administrations do not differ in relevant variables. In this study the Cronbach's Alpha reliability index was calculated to measure the internal consistency of scales. Since alpha can be interpreted as a correlation co-efficient, it ranges in value from 0 to 1. The result of reliability analysis shows that the value for alpha is 0.83. It was greater than the benchmark of 0.60 recommended by Fornel (1982) and Nunnally (1967). This illustrates that all measures had high internal consistency and adequate reliability.

5.3 Factor analysis

Factor analysis (Table 3) is also conducted in order to confirm the construct validity of the scales could be performed adequately by using principle of component analysis. All items with more than 50% loading of the rotated component matrix are accepted, while those less than 50% loading are dropped. The output of the component analysis and varimax rotation produced suggests that the success factor for affecting the acceptance of IT would depend on eight factors namely perceived usefulness, perceived ease of use, social pressure, perceived enjoyment and fun, perceived complexity, management support and internal computing support. It is clearly seen that these factors are really important for banks to take into consideration in order to compete with foreign banks. The eight factors accounted for about 76.50% of the total variance.

5.4 Regression Analysis

Regression analysis was performed to test the relationships between the construct variables and IT acceptance. The linear regression analysis of the original model (table 4) reveals that the R-square of the model is 0.396. This means the model explains 39.6% of the variance in the dependent variable, actual use of the system. The model is statistically significant as the p-value for the model is 0.00.

H₁: Perceived Usefulness

Perceived usefulness (PU) is defined as the degree to which an individual believes that using the system will enhance his job performance (Davis, 1989). The regression coefficient (beta) for perceived usefulness is 0.561 ($p = 0.000$, $p < 0.05$). The regression result indicated that the null hypothesis can be rejected. Therefore, the alternative hypothesis stands. Perceived usefulness positively influences use of IT based on the assumption, that the more useful the potential user experiences the system; the more likely it is that he/she starts using the system. This study finds that there are relationships between perceived usefulness and usage. This result is similar to Davis et al. (1989), Igarria et al., (1995) and Nelson and Jantan (2003) that perceived usefulness is positively related to usage.

H₂: Perceived Ease of Use

Perceived Ease of Use suggests that the easier the user experiences using the system, the propensity for him to use or start using the system is positively influenced. The regression coefficient is -0.086, and the significance level is 0.566 ($P > 0.05$). Therefore null hypothesis cannot be rejected. Ease of Use is not related to personal computing acceptance. The result was inconsistent with Davis (1989), Igarria et al. (1997) and Teo, (2001) that perceived ease of use is a dominant factor in explaining perceived usefulness and system usage. In this study, ease of use is less important maybe because of difficulty in using a system can be overcome if the user thinks that the system will be useful to them.

H₃: Social Pressure.

Social Pressure includes the motivations of individuals who believe they should use IT for obtaining a higher social status or a more important position in their organization. Bankers in our study were asked about the extent to which they perceive social pressure from organization environment (i.e. supervisors, peers and competition) to adopt IT. The regression coefficient is -0.37, and the significance level of 0.797 is greater than alpha at 0.05 level of significance. It can thus be concluded there was no relationship between social pressure and personal computing usage.

H₄: Perceived Enjoyment and Fun

The regression coefficient is 0.90, and the significance level is 0.446 and this is greater than 0.05 level of significance. Therefore, the null hypothesis cannot be rejected. Perceived enjoyment and fun is not statistically significantly affecting the use. This result is similar to the result of Igarria et al. (1995) and Hanudin Amin (2007) that enjoyment is not related to the use of information system and has no statistically significant effect on the acceptance of data processing system.

H₅: Perceived Complexity

There is no relationship between perceived complexity and computer usage. According to the result, perceived complexity indicated a regression coefficient of -0.38, and the significance level of 0.719 is greater than 0.05 significance level. Therefore, the null hypothesis cannot be rejected. These results suggest that perceived complexity is not a factor that would affect personal computing acceptance. This result is similar to result of Al-Gahtani (2003) that perceived complexity is negatively related to computer adoption and system usage.

H₆: Management Support

The regression coefficient (beta) for the first hypothesis perceived usefulness is 0.378 and the significance level is 0.037 ($p < 0.05$). The regression result indicated that the null hypothesis can be rejected. Therefore, the alternative hypothesis stands. Management support is positively influences use of IT.

H₇: Internal Computing Support

There is no significant relationship between the Internal computing support and computer adoption and usage. The results of multiple regression indicated a regression coefficient of 0.133, and the significance level $p = 0.426 > 0.05$. It can be interpreted that the null hypothesis mentioned above cannot be rejected. Therefore, it is concluded that Internal computing support is not related to personal computing usage at 0.05 level of significance.

H₈: External Computing Support

The regression coefficient (beta) for the first hypothesis perceived usefulness is -0.321 and the significance level is 0.045 ($p < 0.05$). The regression result indicated that the null hypothesis can be rejected. Therefore, the alternative hypothesis stands.

Correlation all variables with acceptance are displayed in table 4. In sum only H₁, H₆ and H₈ are supported. These variables show that, perceived usefulness, management support and external computing support were found to be the most influential factors in determining usage.

6. Discussion and Conclusions

The objective of this study is to examine the extent of IT usage, usage pattern and usage determinants in Malaysian banking industry by using TAM. The result indicates that the majority Malaysian bankers heavily used word processing and spreadsheet for routine jobs such as paper work and data maintenance but rarely use the computer for advance functions such as business analysis, planning, decision making and so on. Malaysian bankers also rarely used professional software for specific purposes such as statistical analysis or programming languages.

The regression result of this study appeared to suggest that perceived usefulness, management support and external computing support are criteria that determine the extent of IT usage and acceptance of Malaysian bankers. This result refers to the fact that bankers are likely to use computer because they believe that using the system will enhance their job performance, increase their performance and productivity. This result is in agreement to the findings of Davis et al. (1989), Igarria et al., (1995) and Nelson Oly Ndbusi and Muhammad Jantan (2003) and Selamat et al (2009) that perceived usefulness is positively related to usage. Thus, the greater the perceived usefulness, the more likely that personal computer will be adopted by the Malaysian bankers.

The study also found that there is a relationship between management and external computing support on IT usage. Management Support is referred to the perceived level of general support offered by top management whereas external personal computing support is referred to the technical support provided by friends, vendors, consultants or educational institution external to the company. Management support is able to ensure sufficient allocation of resources and act as a change agent to create a more conducive environment for IT success.

The study leads to a number of contributions to technology acceptance research especially in developing country. First, this study successfully applied the extended TAM in information technology acceptance from Malaysian bankers' perspective. Therefore, it provides useful insights into the knowledge gap in understanding IT adoption among Malaysian bankers and provided a greater understanding of the applicability of TAM in explaining the extent of IT usage and usage determinants in Malaysian banking industry.

Second, this study provides a guideline to the bank management. In order to encourage the use of new information system, a technology must satisfy basic usability requirements and be perceived as useful by its intended user community. Thus management has to increase their effort to create awareness among bankers regarding the potential benefits of IT in their job performance. The study also implied that the support from management will be able to influence the use of IT. This could be done through top management's active participation and motivation. The management must always support the use of computers for job related work and provides most of the necessary help and resources to enable bankers to use computers. At the same time management must provide external computing support in order to encourage banker to use IT in their working practices. This includes providing necessary help, guidance, software and hardware and people resources to adopt and assist the system.

7. Limitation

This study has several limitations. Although the research results suggest several significant factors affecting the acceptance of technology, the findings and implications nevertheless are based on a single study that involved a specific user group in a particular geography. Therefore caution needs to be taken when extrapolating or generalizing these research results to other user groups in other geographic and business environment. The second limitation of this study is related to the sample size that has to be increased in order to improve the existing result and also to be able to use other type of data analysis like AMOS.

References

- Agarwal, R. (1999). Individual acceptance of information technologies. [Online] Available: <http://www.pinnaflex.com/pdf/framing/CH06.pdf> (October 2003) (October 2003).
- Al- Gahtani, Said S. (2003). Computer Technology Adoption in Saudi Arabia: Correlates of Perceived Innovation Attributes. *Information Technology for Development*, 10, 57-69.
- Chau, P. Y. K., & Hu, P. J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, 32(4), 699–719.
- Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, Vol 13, 319-339
- Davis, F.D., Bagozzi R.P and P.R. Warshaw. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, Vol. 35, No.8, 982-1003.
- Davis, F.D., Bagozzi, R.P., and Warshaw, P.R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, Vol. 22 No. 14, 1111-32.
- Fornell, C. (1982). *A Second Generation of Multivariate Analysis*, 1-21, New York: Praeger.
- Gable, G.G. (1991). Consultant Engagement for Computer System Selection: A Pro-Active Client Role in Small Businesses. *Information and Management*, Vol 20, 83-93.
- Hair, J. F. Jr., Black, W. C., Babin, B., Anderson, R., and Tatham, R. (2006). *Multivariate Data Analysis*, (6th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hanudin Amin. (2007). An Empirical Investigation on Consumer Acceptance of Internet Banking in an Islamic Bank. *Labuan Bulletin of International Business and Finance*, Vol 5, 41-62.
- Hartwick, J., & Barki, H. (1994). Explaining the Role of User Participation in Information System Use. *Management Science*, 40, (4), 440-465.
- Igbaria, M, Guimaraes, T., & Davis, G.B. (1995). Testing the Determinants of Microcomputer Usage via a Structural Equation Model. *Journal of Management Information Systems*, Vol.11, No. 4, 87-114.
- Igbaria, M. (1993). User Acceptance of Microcomputer Technology: An Empirical Test. *Omega*, 21, (1), 73-90.
- Igbaria, M., and S. Parasuraman. (1989). A Path Analytic Study of Individual Characteristics, Computer Anxiety and Attitudes Towards Microcomputers. *Journal of Management* 15(3): 373–88.
- Igbaria, M., Iivari, J., and Maragahh, H. (1995). Why do individuals use computer technology? A Finnish case study. *Information & Management*, 29, 227-238.
- Igbaria, M., Parasuraman, S., & Baroudi, J. (1996). A Motivational Model of Microcomputer Usage. *Journal of Management Information Systems*, Vol.13, No. 1, 127-143.
- Igbaria, M., Zinatelli, N., Cragg, P., and A.L.M. Cavaye. (1997). Personal Computing Acceptance Factors in Small Firms: A Structural Equation Model. *MIS Quarterly*, Vol.21, No.3, 279-305.
- Lymperopoulos, C., and Chaniotakis, I. E. (2005). Factors affecting acceptance of the internet as a marketing intelligence tool among employees of Greek bank branches. *International Journal of Bank Marketing*, Vol. 23 Number 6, 484-505.

- Ndubisi, N. O., & Jantan, M. (2003). Evaluating IS usage in Malaysian small and medium-sized firms using the technology acceptance model. *Logistics Information Management*, 16(6), 440-450
- Nunnally, J. (1967). *Psychometric Theory*. Mc Graw Hill, New York.
- Nunnally, J.C., and Bernstein, I.H. (1994). *Psychometric Theory*. (3rd Edition), Mc Graw Hill, et al., New York
- Ortega, B. H., Martinez, J. J., and Hoyos, M. J. M. D. (2006). Analysis of the moderating effect of industry on online behaviour. *Online Information Review*, Vol. 30 Number 6, 681-698
- Rogers, E. M. (1986). *Communication Technology – The New Media in Society*, New York, NY: The Free press.
- Rogers, E.M., and Shoemaker, F.F. (1997). *Communication of Innovation: A Cross Culture Approach*, New York, Free Press.
- Selamat, Z, Jaffar, N and Ong, H.B (2009). Technology Acceptance in Malaysian Banking Industry. *European Journal of Economics, Finance and Administrative Sciences*, Vol. 17, 143-155
- Taylor, S., & Todd, P.A (1995). Understanding Information Technology Usage: A test of Competing Models. *Information Systems Research*, 6(2), 144-176
- Teo, T.S.H. (2001). Demographic and motivational variables associated with Internet usage activities. *Internet Research: Electronic Networking Applications and Policy*, Vol. 11, No. 2, 125-137.
- Teo, T.S.H., Lim, V.K.G., and Lai, R.Y.C. (1999). Intrinsic and Extrinsic Motivation in Internet Usage. *Omega International Journal of Management Science*, 27, 25-37.
- Venkatesh, Viswanath & Fred D. Davis. (2000). A Theoretical Extension of Technology Acceptance Model: Four Longitudinal Studies. *Management Science*, 46 (2), 186-204
- Venkatesh, Viswanath. (1999). Creation of favorable user perceptions: exploring the role of intrinsic motivation. *MIS Quarterly*, 23(2), 239-260.
- Venkatesh, Viswanath., & Fred D. Davis. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision Sciences*, 27(3), 451-481.

Table 1. Demographic Characteristics of the Survey Participants

Demographics	Frequency	Percentage (%)
Gender:		
Male	33	47.8
Female	36	52.2
Age:		
18-25	11	16.0
26-35	28	40.6
36-45	25	36.2
46-55	5	7.2
Marital Status:		
Single	17	24.6
Married	50	72.5
Divorced	2	2.9
Education:		
Masters	2	2.9
Degree/Professional Degree	16	23.2
Diploma	13	18.8
Certificate	16	23.2
Others	22	31.9
Profession:		
Clerical	27	39.1
Officer	24	34.8
Professional Staff	4	5.8
Middle/Top Management	14	20.3
Annual Income:		
Less than 12,000	8	11.6
12,000 – 24,000	20	29
24,001-36,000	13	18.8
More than 36,000	28	40.6

Table 2. Information Technology Usage

	% of Respondents
Word Processing (e.g., Word)	81.2
Database (e.g., dBase)	14.5
Statistical analysis	11.6
Internet	66.7
Electronic Mail	66.7
Programming Languages (e.g., COBOL, Visual basics)	5.8
Graphics	7.2
Application packages (Accounting or payroll packages)	17.4
Power Point	37.7
Specific Job Tasks where system is applied	
Producing report	84.1
Letters and memos	73.9
Data storage/retrieval	68.1
Making decisions	27.5
Analyzing trends	23.2
Planning/forecasting	27.5
Analyzing problems/alternatives	17.4
Budgeting	29
Controlling and guiding activities	44.9
Electronic communications	65.2
Frequency of Use	
Less than once a month	1.4
Once a month	1.4
A few times a month	1.4
A few times a week	4.3
About once a day	2.9
Several times a day	88.4
Amount of Time per Day	
Almost never	4.3
Less than ½ hour	2.9
From ½ hour to 1 hour	1.4
1-2 hours	4.3
2-3 hours	5.8
More than 3 hours	81.2

Table 3. Factors affecting the acceptance of IT

Factors Affecting the acceptance of IT	Rotated Factor Loading	Eigen value	% of Variance
PERCEIVED USEFULNESS			
1. Using a computers improves my job performance	0.780	13.073	38.449
2. Using computers increases my productivity on the job	0.811		
3. I find computers useful in my job	0.778		
4. Using computers enhances my effectiveness on the job.	0.839		
5. Using computers could provide me with information that would lead to better decisions.	0.801		
6. Using computers enables me to accomplish my tasks more quickly	0.715		
PERCEIVED EASE OF USE			
1. Learning to use computers is easy for me	0.719	2.643	7.774
2. I find it easy to get computers to do what I want them to do	0.651		
3. It is easy for me to become skillful at using computers.	0.841		
4. I find computers easy to use.	0.849		
SOCIAL PRESSURE			
1. My immediate supervisors think I should use the microcomputer more in my job.	0.861	1.008	2.964
2. My peers think I should use the computer regularly.	0.571		
PERCEIVED ENJOYMENT AND FUN			
1. I do not see time go by when I am using computer	0.595	2.531	7.445
2. Using computer is fun.	0.859		
3. Using computers is exciting	0.882		
4. Using computers is pleasant	0.911		
PERCEIVED COMPLEXITY			
1. Using a microcomputer can take up too much of my time in performing many tasks	0.891	1.249	3.673
2. When I use a microcomputer, I find it difficult to integrate the work on the computer into my existing work	0.892		
3. Using a microcomputer exposes me to the vulnerability of computer breakdown and loss of data.	0.813		
MANAGEMENT SUPPORT			
1. Management is aware of the benefits that can be achieved with the use of computers.	0.624	1.087	3.198
2. Management always supports and encourages the use of computers for job related work.	0.655		
3. Management provides most of the necessary help and resources to enable people to use computers.	0.613		
4. Management is really keen to see that people are happy with using computers.	0.677		
INTERNAL COMPUTING SUPPORT			
1. A specific person (or group) is available for assistance with hardware difficulties.	0.782	3.715	10.927
2. A specific person (or group) is available for assistance with software difficulties.	0.827		
3. Specialized instruction and education concerning software is available to me.	0.733		
4. Guidance is available to me in the selection of hardware, software, printers and other equipment.	0.755		
5. A good access to hardware resources is provided when people need them.	0.672		
6. A good access to various types of software is provided when people need them.	0.698		

Factors Affecting the acceptance of IT	Rotated Factor Loading	Eigen value	% of Variance
EXTERNAL COMPUTING SUPPORT			
6. A specific person (or group) is available for assistance with hardware difficulties.	0.661	6.076	2.066
7. A specific person (or group) is available for assistance with software difficulties.	0.563		
8. Specialized instruction and education concerning software is available to me.	0.713		
9. Guidance is available to me in the selection of hardware, software, printers and other equipment.	0.706		

Table 4. Regression results

Usage	R	R2	Standard Error	Standard Coefficient Beta	Significance
	0.629	0.396			
(Constant)			0.748		.000
Perceived Usefulness			0.030	.561	.000
Perceived Ease of Use			0.053	-.086	.566
Social Pressure			0.069	-.037	.797
Perceived Enjoyment and Fun			0.041	.090	.446
Perceived Complexity			0.037	-.038	.719
Management Support			0.036	.378	.037
Internal Computing Support			0.048	-.133	.426
External Computing Support			0.041	-.321	.045

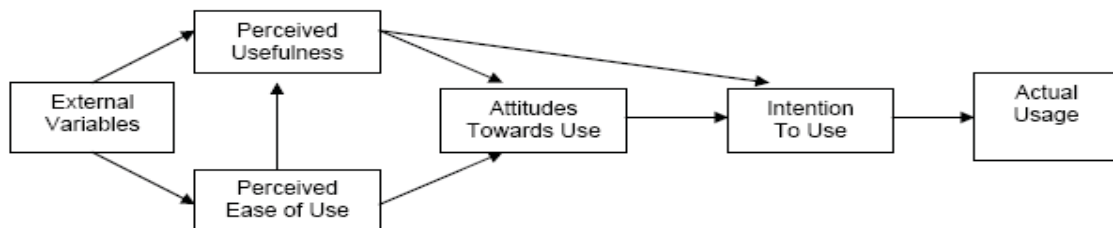


Figure 1. Technology Acceptance Model (Davis, 1989)

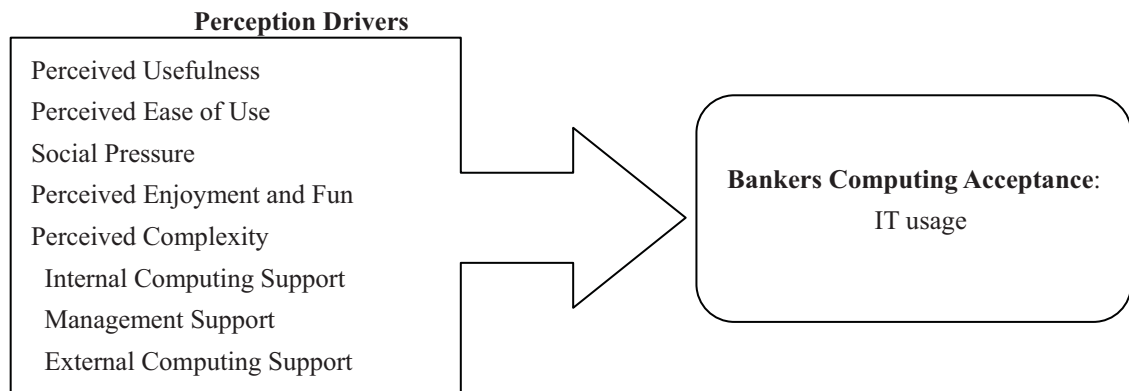


Figure 2. Factors Affecting Personal IT Usage