The Negative Effect of Organization Culture Could Slow the Usage or the Adoption for the Technology

Dr. Sami Mohamed Al Haderi

Dr. Faiz Bin Ahmed

School of Business
University Utara Malaysia
Malaysia

Abstract

Purpose: *the study aims to test the influence of an important factor of organization culture and add this factor to the key factors in the theory of technology acceptance in order to provide better understanding for the factors influencing the acceptance of information technology among the individual perceptions. In addition, this study aims to test the success of the technology acceptance model in Yemen culture. This study aims to test the factors influencing the acceptance of technology in Yemen public sector.* ***Methodology:*** *survey questionnaire was distributed to 53 government utilities and 357 cases were used in the analysis. Structural Equation Modeling AMOS 18 was used for the analysis of the proposed model.* ***Findings*** *the study confirmed the theory of TAM and showed its potential capability in the Middle East, particularly in Yemen. The study has provided empirical evidence for the negative effect of organization culture on the intention behavior to use. Empirical evidence has shown that the employees and managers have the capability to use the technology.* ***Significance****: This study has provided empirical evidence for the effects of new technology determinants in the government sector. In particular, it has successfully revealed that organization culture is an important determinant in influencing the adoption of technologies.*

Keywords: Technology Acceptance Model, Organization Culture, Structural Equation Modeling, Yemen

Social Characteristics

Social factors were defined as whether the subject perceived that their work group (faculty, staff, study group, professor) thought they should use the intranet and whether or not they would follow what others thought they should do (Chang, 2004). Social influence is the degree to which an employee perceives that others coworkers believe he or she should use a technology (Dadayan, Ferro, 2005). Social characteristics (social influence) are defined as the perceived social pressure to perform or not to perform the behavior (Fishbein & Ajzen, 1975). It also, defined as the degree to which an individual perceives that important others believe he or she should use the new system (Davis, at al, 1989). Another conceptualization is that information conveyed via individuals' social networks influences their cognition about a target technology (Lewis, Agarwal, Sambamurthy, 2003). Social factors have been defined as whether the subject perceives that their work group (faculty, staff, study group, professor) thought they should use the intranet and whether or not they would follow what others thought they should do (Chang, 2004). It has also been defined as the degree to which an employee perceives that other coworkers believe he or she should use a technology (Dadayan, Ferro, 2005).

Organization Culture

Organization Culture consists of the patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts (Zakour, 2004). It is "the collective programming of the mind which distinguishes the members of one group or category of people from another" (Zakour, 2004). It is also defined as: (a) something that is shared by all or almost all members of some social group; (b) something that the older members of the group try to pass on to the younger members; and (c) something that shapes behavior, or that structures one's perception of the world (Merchant, 2007).

Merchant (2007) carried out a study aimed at investigating the relationship between the cultural/work values of the people involved and IT adoption among three cultures using technology acceptance model TAM. The study found that organization culture is a crucial element that determines the acceptance or rejection of technology. He further revealed that the French and the Americans would most likely adopt a new innovation, but the Chinese were less enthusiastic to adopt as fast as the French and the Americans. Brown et al. (1998) suggest in their study the need to consider cultural resistance to technologies. In his study to extend TAM to give a better understanding of the organizational cultural values differences as predictor of behavior toward IT, Zakour (2004) found that differences in cultural dimensions across countries, such as individualism/collectivism, power distance, masculinity/femininity, uncertainty avoidance, monochromic/polychromic time, and high/low context, affect technology acceptance. For example, people who have high-context values for technology have less favorable perception toward the technology than those who have low-context values. That was due to the high context people do not provide more information in the context of the message when using electronic communication. Perceived information quality will more likely to influence intention to use the technology for people in a feminine than those in a masculine culture. People with low level of uncertainty avoidance use IT more than people with high level of uncertainty avoidance. Zakour (2004) further revealed that uncertainty avoidance, individualism/collectivism, power distance and masculinity/femininity, individualism/collectivism are moderators between subjective norms and intention to behavior. He also demonstrated that social influence from important people in cultures who have high uncertainty avoidance is much more important in determining IT usage than in cultures comfortable with uncertainty avoidance.

In a different study that looked at the relation between the culture/work value of the people and the usage of IT using TAM, Merchant (2007) found that the cultural orientation affects the individual in the way they communicate in their workplace to achieve the company goals, moderated by perceived usefulness and ease of use. The study was conducted in many countries like America, France, China and five Arab countries. Yoon (2009) explored the effect of organizational culture on consumer acceptance of e-commerce in China. The study confirmed that the consumer acceptance model could be applied in developing countries. Perceived usefulness, perceived ease of use and trust are important factors of consumer e-commerce acceptance. Moreover, the study found that uncertainty avoidance has a direct effect on intention to use and moderates the effect on the relationship between perceived usefulness and intention to use. Additionally, uncertainty avoidance is considered the most influential factor of the organizational culture in affecting consumer e-commerce acceptance. Yeniyurt and Townsend (2003) found that uncertainty avoidance has a negative effect on the acceptance rates of new products. They contend that in a high uncertainty avoidance culture, people may not be inclined to carry out online shopping. They further found that societies with high power distance are not more open to new ideas and products. Therefore, lower acceptance of e-commerce in these societies is expected. However, the study found that power distance and individualism have positive effects on intention to use. The unexpected result was due to the fact that customer in high power distance societies may regard online shopping as an authoritarian value. Masculinity was found to have a moderating effect between perceived ease of use and perceived usefulness and intention to use in e-commerce acceptance.

Similarly, Li, Hess, Mcnab, and Yu (2009) investigated the influence of organizational cultural values on acceptance of a personal web portal by users in China and the United States. The study supported some direct effects of individualism/collectivism and time orientation on adoption intention. However, the moderating cultural effects were not supported. Perceived usefulness and normative beliefs had positive effects on intention; however, perceived ease of use did not have a significant direct relationship with intention, and had an indirect relationship through its impact on perceived usefulness. Moreover, the role of individualism/collectivism was supported. Individualism positively affected perceived ease of use. However, its effect was not significant on perceived usefulness. Even time orientation was found to directly affect behavioral beliefs where long-term orientation positively affecting both perceived usefulness and perceived ease of use. Power distance, uncertainty avoidance, and masculinity were not found to affect the relationship between normative beliefs and intentions. Success in one country does not guarantee success in another country, as in the case of a study conducted by Almutairi (2007) which aimed to test the applicability of the technology acceptance model (TAM) in Kuwaiti ministries in order to understand the IT in the government utilities. The study found that TAM did not explain the acceptance for the technology because it may not have international validity and it may not suit other cultures. Ali (2004) contends that culture could be a barrier for the success or the acceptance of the IT.

In his study that aimed to view the low usage of technology specially the Internet in Arab countries in comparison to developed countries, he asserts that if Arab countries want to be in the same level with the developed countries in terms of technology adoption and usage, they should accelerate the development of different sectors like society and the subcultures because most of the problems stem from the perceptions of IT in the Middle East. Due to the fact that there was agreement in the previous studies concern the important of the effect of Organization cultural on the usage of the technology. Based on the existing empirical evidence, this study considers Organization cultural as an important determinant of the user's acceptance of the IT. Therefore, there is a need to investigate the effect of Organization cultural in different cultural and organizational settings, especially in the public sector. Hence, based on the above, this study considered Organization cultural effects on technology acceptance to provide empirical evidence and hence to offer recommendation for public organizations in their planning for IT development by considering the effect of culture.

Methodology

Response Rate

The response rate and descriptive statistics were run as the first stage of analysis. As mentioned earlier, all in all 760 questionnaires were distributed. Of these, 585 were returned, yielding a response rate of 77%, which is considered very good (Cable & Derue, 2002) in comparison to other studies found in the relevant literature. Also, 160 cases with missing value and 68 cases outliers were deleted from 585 questionnaires were returned. Therefore, the data were ready for the analysis is 357 cases.

Operational Definition of Variables and Hypotheses

Intention to use

Intention to use is a variable which refers to the intention of an end-user to use the new technology (Seymour, Makanya, & Berrange, 2007). In other words, it is the probability of using a particular system. Technology acceptance model (TAM) proposes that intention to use affects and causes actual use of a new system. Similarly, in Aversano's (2005) study that used TPB confirmed that intention to behave determines actual usage. So, the intention to use the technology determines the relations of actual use of the system. However, latest studies confirmed that intention to use technology is merely a mediating factor (e.g. Vankatesh & Davis, 2000; Yalcinkaya, 2007).

Perceived ease of use

In TAM, perceived ease of use is defined as the degree to which an individual believes that using a particular system is free of effort (Davis, 1989). In this study, this variable can be defined as the managers' and employees' perceptions about the lack of effort when using the new system. Perceived ease of use has an effect on both intention to use and perceived usefulness, despite the fact that some studies found that perceived ease of use has no influence on intention to use (Vankatesh & Davis, 2000; Yalcinkaya, 2007).

H1: Perceived ease of use has a positive effect on the intention to use the system.
H2: Perceived ease of use has a positive effect on perceived usefulness of the system.

Perceived Usefulness

Perceived usefulness refers to the degree of which the user believes that the use of a particular system will support his work" (Davis, 1989). It is related to effectiveness on the job, to more productivity at work, such as spending few time or money, and to relative motivation for usage of that particular technology (Yang & Yoo, 2004).
In this study, perceived usefulness refers to the perception of managers and employees on the usefulness of using a particular system. Usefulness has been tested relative to the system's ability to increase performance, productivity, and effectiveness. Many empirical studies have found that perceived usefulness is an important determinant of intention to use (Chismar & Patton, 2002; Goeke, 2006; Kiraz & Ozdemir, 2006; Kishore, McLean, 2001; Venkatesh & Davis, 2000).

H3: Perceived usefulness has a positive effect on intention to use the system.

Social Factors of Organization Culture

Organization Culture is another variable of social factors considered in this study. Culture is defined as (a) something shared by all or almost all members of some social group, (b) something that the older members of the group try to pass on to the younger members, and (c) something that shapes behavior, or that structures one's perception of the world (Merchant, 2007). This research will use the following dimensions of culture: power distance, masculinity/femininity, individualism/collectivism and uncertainty avoidance (Mooij, Hofstede, 2002; Zakour, 2004). Merchant (2007) carried out a study aimed at investigating the relationship between the cultural/work values of the people involved and IT adoption among three cultures using technology acceptance model TAM. The study found that culture is a crucial element that determines the acceptance or rejection of technology. He further revealed that the French and the Americans would most likely adopt a new innovation, but the Chinese were less enthusiastic to adopt as fast as the French and the Americans. Brown et al. (1998) suggest in their study the need to consider cultural resistance to technologies. Yoon (2009) confirmed the importance of organizational culture effects on the perceived usefulness and perceived ease of use towards the acceptance of the information technology. Therefore, organization culture is considered an important determinant for perceived usefulness and perceived ease of use towards the acceptance of the information technology. So, the following hypotheses are offered:

H9: Organization Culture has a negative effect on the perceived ease of use toward the usage of a particular system.
H10: Organization Culture has a negative effect on perceived usefulness toward the usage of a particular system.

Data Collection Instrument – Questionnaire

Social Characteristic – Organization Culture Instrument

To measure organization culture, the instrument was adopted from Schrodt (2002), which has 35 items. This study chose these instruments because it focuses in the communication and information flow inside the organization. However, this study used the common four diminutions in the previous studies for measuring the organization culture individualism/collectivism (2 items), power distance (2 items), masculinity/femininity (2 items), uncertainty avoidance (2 items); each diminution contains two items to measure this diminution. Moreover, the other items used in this study are for the researcher purposes. These items are measured on a five-point scale with ‘1’ "Strongly Disagree," ‘2’ "Disagree," ‘3’ "Neither Agree or Disagree," ‘4’ "Agree," and ‘5’ "Strongly Agree." The items are as follows:

1. In my organization, people I work with are direct and honest with each other.
2. In my organization, people I work with accept criticism without becoming defensive.
3. In my organization, people I work with resolve disagreements cooperatively.
4. In my organization, people I work with function as a team.
5. In my organization, people I work with are cooperative and considerate.
6. In my organization, people I work with constructively confront problems.
7. In my organization, people I work with are good listeners.
8. In my organization, people I work with are concerned about each other.
9. In my organization, labor and management have a productive working relationship.
10. This organization motivates me to put out my best efforts.
11. This organization respects its workers.
12. This organization treats people in a consistent and fair manner.
13. Working with this organization feels like being part of a family.
14. In my organization there is an atmosphere of trust.
15. This organization motivates people to be efficient and productive.
16. I get enough information to understand the big picture here.
17. In my organization, when changes are made, the reason why are made is clear.
18. I know what is happening in work sections outside of my own.
19. I get the information I need to do my job well.
20. I have a say in decisions that affect my work.
21. I am asked to make suggestions about how to do my job better.
22. This organization values the ideas of worker at every level.
23. My opinion counts in this organization.

24. Job requirements are made clear by my superior.
25. When I do a good job my superior tells me.
26. My superior delegate responsibility.
27. My superior is approachable.
28. My superior gives me criticism in a positive manner.
29. My superior is a good listener.
30. My superior tells me how I am doing.
31. Decisions made at the meetings get put into action.
32. Everyone takes part in discussions at the meetings.
33. Our discussions in the meetings stay on track.
34. Time in the meeting is time well spent.
35. Meetings tap the creative potential of the people present.

The 35 items above were to tap six dimensions of organizational culture: individualism/collectivism (items 1-9), power distance (10-15), masculinity/femininity (16-19), uncertainty avoidance (20-23), time perception (monochromic/polychromic) (24-30), and high context/low context (31-35).

Findings

H9: Culture has a negative effect on perceived ease of use toward the usage of a particular system.
H10: Culture has a negative effect on perceived usefulness toward the usage of a particular system.

As expected, the result supports the hypothesis that culture has a non- significant negative effect on perceived ease of use ($Y = -.08$, T-value = -1.038, $p < .002$). For every increase in culture by one, perceived ease of use decreases by .08 standard points. The result also supports the hypothesis that culture has a non-significant negative effect on perceived usefulness ($Y = -.086$, T-value = -1.192, $p < .002$). For every increase in culture by one, perceived usefulness decreases by .086 standard points. Both results are consistent with those in previous studies (e.g. Li, Hess, Mcnab, & Yu, 2009; Yeniyurt & Townsend, 2003; Yoon, 2009; Zakour, 2004) in that there is cultural resistance to technologies (Brown et al., 1998). People with low level of uncertainty avoidance, they use information technology more than people with high level of uncertainty avoidance (Yoon, 2009). Furthermore, high uncertainty avoidance contributes in the affect of the culture on the intention to use by $Y = 0.718$, T-value = 0.918, $p < .002$. For every increase in the Power distance by 0.718, the culture increases by 0.918, which caused negative effects on the intention to use, that was supported by Yeniyurt and Townsend (2003). In a high uncertainty avoidance culture, people may not be inclined to use the new information technology, as the society with high power distance is not open to new ideas and products. Therefore, lower acceptance of using the new technology in these societies is expected. However, power distance and individualism have positive effect on the culture which causes negative effects on intention to use throughout ease of use and usefulness (Yeniyurt and Townsend, 2003). Besides that, Power distance contributes in the affect of the culture on the intention to use by $Y = .862$, T-value = 1.427, $p < .002$. For every increase in the Power distance by .862 culture increases by 1.427, which caused negative effects on intention to use, and that was supported by (Yeniyurt and Townsend, 2003). This expected result was due to the fact that employees and managers in the government sector in a high power distance society that may attribute to the lack of usage of the new information technology to the lack for training and knowledge about the new technology. They may also not complain about the current way of performing their daily work.

Moreover, individualism is contributing in the affect of the culture on the intention to use by ($Y = .763$, T-value = 1.000, $p < .002$). For every increase in the individualism by .763 points, culture increases by 1, which it caused negative effects on intention to use, and that was supported by Li, Hess, McNab, Yu, (2009). In addition, masculinity/femininity contributes in the affect of the culture on the intention to use by ($Y = .783$, T-value = 0,991, $p < .002$). For every increase in the masculinity/femininity by .783, the culture increases by 0,991, which caused negative effects on intention to use, that was supported the study conducted by Li, Hess, McNab, Yu, (2009).

Discussion and Conclusion

The findings in this study provide explanation for the usage of the new information technology among employees and managers in the Yemeni government sector by using the information technology acceptance theory and united theories (TAM2 and UTAUT). Based on the analyses, the model showed good of fitness of the measurements. It was also found that the structural and causal model can explain the employees and manager's usage and adoption of information technology. Consistent with the findings of previous studies (e.g. Algahtani, 2004; Ahn, Ryu, & Han, 2007; Mohd, Syed Mohamad, & Zaini, 2005; Saeed & Helm, 2008), perceived usefulness and perceived ease of use are the important determinants of behavioral intention to use, and they mediate the relation between the external independent variables and the dependent variable of intention to use. In this study, perceived usefulness and perceived ease of use were found to have a positive significant effect on the intention to use the information technology and perceived ease of use has direct and indirect effects on the intention to use the information technology. However, the path coefficient showed that perceived ease of use has a stronger effect on the intention to use than perceived usefulness (Y = .319, T-value = 4.544) & (Y = .215, T-value = 2.840). Respectively, this result is consistent with (Kwan & Wang, 2009; Jones & Hubona, 2005; Klloppiing & McKiiney, 2004). In another ward, employees accept to use the information technology after they perceived it to be useful and easy to use (Davis, 1989).

Perceived ease of use was shown to have the strongest direct effects on perceived usefulness in this model compared to the study conducted by Shih and Huang's (2009). In addition, it seems that employees and managers in the public sector who have some sort of background in information technology or have respectful background about the technology found that using the technology in their daily work makes the work processes more smooth and easier to fulfill their tasks and perceived that the information system is easy to use, which contributes to the new information technology being perceived to be useful. Consistent with previous studies (e.g. Li, Hess, Mcnab, & Yu, 2009; Yeniyurt & Townsend, 2003; Yoon, 2009; Zakour, 2004), culture was found to have negative influence on perceived usefulness and ease of use towards using the information technology. However, cultural dimensions of power distance, individualism, and masculinity were shown to have positive effects on intention to use. The result suggests that culture plays an important role in formulating the perception of the individual in the society (Merchant, 2007), and in this case in shaping individuals' behavior towards using or adopting the information technology.

Limitations of the Study

Some limitations of the present study are noteworthy to be highlighted, as follows:

1. The study planned to collect the data using both qualitative and quantitative methods so that the data gathered could have been more varied and rich Alsohybe, (2007) to enable the researcher to provide qualitative explanations for the information technology acceptance in the government sector. However, due to the current situation in Yemen, such approach was not feasible. In other words, the conflict that currently exists in Yemen prevented the researcher from conducting interviews with the target sample (top management and officials in the government). However, the study succeeded in obtaining the valid finding by using one method which is quantitative methods to achieve the study goals.
2. This research included all employees and managers in the government sector who are currently using the information technology and those who seldom use the technology. The studies confronted some difficulties in getting permission or distribute the questionnaire in some utilities due to the underestimate for the academic research. However, the study succeeded in distributing the questionnaire in these utilities by using personal communication and permissions from the top management in these utilities.

Practical Recommendations of Study

There are some recommendations for the practitioners and the officials in the Yemeni government who are in charge of decision making and formulating the information technology strategy. Since the information technology is developing rapidly, it is important for them to understand the drivers (variables) that influence the acceptance of any new technology. In particular, those in charge should make sure that the technology adopted, be it the hardware or software, is perceived to be useful and easy to use to encourage users to accept and finally use the technology. If the technology is perceived to be useless and difficult to use, any investment made by those in authority will not yield any return as expected and such investment is a waste of resources, time and effort.

This means that before implementing and installing the new technology, some feasibility studies need to be carried out first Smith, Green, (2002).

Recommendations for Future Studies

With regards to future studies, the following recommendations are proposed:

- The scope of the study targets the individuals in the government sector. Therefore, future researchers can consider conducting studies in the private sector individuals or carry out comparative studies between the public sector and private sector in the republic of Yemen or any country.
- This study used quantitative method for collecting the data and could not conduct qualitative data due to the conflict between the political parties and the civil war, which prevented this study from conducting the necessary interviews with the relevant individuals. Thus, future studies could consider employing qualitative methodology to gather qualitative information on technology acceptance.
- This study has shown some important factors that could influence an individual's intention towards the usage of the new information technology. However, it is possible that other factors, such as training and motivation that were not considered in this study, may also be responsible in determining technology acceptance. By doing so, our knowledge on the factors that influence technology acceptance could be widened.

The relationship between social factors such as norms and organization culture on the acceptance of technology among employees in the public sector is significant. The study has provided empirical evidence for the direct positive effect of subjective norm on the intention behavior to use towards the actual usage for the technology and that encourage the employees and managers to use the technology. In addition, the study has provided empirical evidence for the negative effect of organization culture on the acceptance of technology which could slow the usage or adoption for the technology. This study has mentioned perceived gap in the technology acceptance literature in the Middle East in particular, in the Republic of Yemen and responding to calls that support that technology acceptance lacks empirical research and there are needs for understanding its factors and their influences in the acceptance for the technology. This study tested the validity and reliability of the technology acceptance scales in the public sector of Yemen, which adopted from the original theory or the studies which undertook the original theory in their studies.

References

Agarwal, R. (2000). Individual acceptance of information technologies. Framing the domains of IT management: Projecting the future through the past, 85-104.

Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. Mis Quarterly, 24(4), 665-694.

Aiman-Smith, l., & Green, s. G. (2002). Implementing new manufacturing technology: The related effects of technology characteristics and user learning activities. Academy of Management Journal, 45(2), 421-430.

Ajzen, I. (2002). Residual effects of past on later behavior: Habituation and reasoned action perspectives. Personality and Social Psychology Review, 6(2), 1-107.

Alan Bryman, & Bell, E. (2003). Business research methods. United state- new yark: Oxford University Press.

Al-Gahtani, S. (2004). Computer Technology Acceptance Success Factors in Saudi Arabia: An Explorator. Journal of Global Information Technology Management, 7(1), 57-69.

Alsohybe, N. T. (2007). The implementation of e-government in the Republic of Yemen: An empirical evaluation of the technical and organizational readiness. Unpublished Dissertation, University Microfilms International, P. O. Box 1764, Ann Arbor, MI, 48106, USA, United States -- Minnesota.

Andrew Burton-Jones, & Hubona, G. S. (2005). Individual Differences and Usage Behavior: Revisiting a Technology Acceptance Model Assumption. The DATA BASE for Advances in Information Systems, 36(2), 58-77.

Brown, I. T. J. (2002). Individual and technology factors affecting perceived ease of use of web-based learning technologies in developing country. The electronic journal on information system in developing country, EJISDC (2002), 9(5), 1-15.

Byrne, B. M. (2010). structural equation modeling with AMOS (2 ed. Vol. 16). united state of America: taylor, francis group, 16(2), 1-230.

Chang, P. V.-C. (2004). The validity of an extended technology acceptance model (TAM) for predicting internet/portal usage Unpublished A Master's paper for the M.S. in I.S. degree, the University of North Carolina at Chapel Hill, Carolina.

Dadayan, L., & Ferro, E. (2005). When Technology Meets the Mind: A Comparative Study of the Technology Acceptance Model

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS quarterly, 13(3), 319-340.

Fred D. Davis, Richard P. Bagozzi, & Warshaw, P. R. (1989). acceptance of computer technology: a comparison of two theoretical models. Management science, 35(8), 982-1003.

Fred D. Davis, Richard P. Bagozzi, & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. Management science, 35(8), 982-1003.

Goeke, R. J. (2006). An examination of the effects of experience, expertise, and perceived flexibility on data warehouse use. Unpublished Dissertations, Kent State University, United States -- Ohio.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). multivariate data analysis,7/E (7th ed.). upper saddle river, : Prentice Hall , 7th, pp816.

Icek Ajzen, & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. European review of social psychology, 11(1), 1-33.

IInge M.. Klloppiing, & McKiinney, E. (2004). Extending the Technology Acceptance Model and the Task-Technology Fit Model to Consumer E-commerce. Information Technology, Learning, and Performance Journal, 22(1), 35-47.

Inge M. Klopping, & Earl McKinney, J. (2006). Practice Makes a Difference: Experience and E-Commerce. Information Technology, Learning, and Performance Journal, 24(1), 25-37.

Khawaja A. Saeed, & Abdinnour-Helm, S. (2008). Examining the effects of information system characteristics and perceived usefulness on post adoption usage of information systems. Information & Management, 45(6), 376-386.

Kiraz, E., & Ozdemir, D. (2006). The Relationship between Educational Ideologies and Technology Acceptance in Pre-service Teachers. Educational Technology & Society, 9(2), 152-165 retrived from http://citeseerx.ist.psu.edu/viewdoc/download?doi=110.151.151.109.6185&rep=rep6181&type=pdf.

Kwan, R., & Wang, F. L. (2009). Hybrid Learning(ICHL2009). Paper presented at the 2nd International Conference on Hybrid Learning. Retrieved from http://www.cs.cityu.edu.hk/~ichl2009/ICHL2009_Local.pdf.

Lynda Aiman-Smith, & Green, S. G. (2002). Implementing New Manufacturing Technology: The Related Effects of Technology Characteristics and User Learning Activities. [journal]. The Academy of Management Journal, 25(2), 421-430

Marieke de Mooij, & Hofstede, G. (2002). Convergence and divergence in consumer behavior: implications for international retailing. Journal of Retailing, 78(1), 61-69

Martin Fishbein, & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. london, england: Addison-Wesley Pub (Sd) (June 1975)

Merchant, S. (2007). Exploring the Influence of Cultural Values on the Acceptance of Information Technology: An Application of the Technology Acceptance Model (Vol. 4). santa rosa, california 95409 USA: information science press.

Rajiv Kishore, & McLean, E. R. (2001). Thw role of personal innovativeness and self-efficacy in Information technology acceptance: an extension of TAM with notions of risk Paper presented at the Twenty-Second International Conference on Information Systems, New york.

Ramazan Yalcinkaya, B. A., M.S. (2007). Police officers' adoprion of information technology: a case study of the turkish POLNET system. Unpublished Dissertation, Univesity of North Texas, North Texas.

Schrodt, P. (2002). The relationship between organizational identification and organizational culture: Employee perceptions of culture and identification in a retailsales organization'. Communication Studies, 53(3), 189-202.

Shih, Y.-Y., & Huang, S.-S. (2009). The actual usage of erp systems: An extended technology acceptance perspective. Journal of Research and Practice in Information Technology, 41(3), 263-276.

Tony Ahn, Seewon Ryu, & Han, I. (2007). The impact of Web quality and playfulness on user acceptance of online retailing. Information & Management, 44(3), 263-275

Viswanath Venkatesh, Michael G. Morris, Gordon B. Davis, & Davis, F. D. (2003). User acceptance of information technology toward a unified view MIS Quarterly, 27(3), 425-478.

William G. Chismar, & Wiley-Patton, S. (2003). Does the Extended Technology Acceptance Model Apply to Physicians, hicss. Paper presented at the 36th Annual Hawaii International Conference on System Sciences (HICSS'03), vol 6, pp 1-160, Big Island, Hawaii

William Lewis, Ritu Agarwal, & V. Sambamurthy. (2003). Sources of influence on beliefs about information technology use: An empirical study of knowledge workers MIS Quarterly, 27(4), 657-678.

Xin Li, Traci J. Hess, Anna L. McNab, & Yu, Y. (2009). Culture and acceptance of global web sites: a cross-country study of the effects of national cultural values on acceptance of a personal web portal. ACM SIGMIS Database, 40(4), 49-74.

Yang, H.-d., & Yoo, Y. (2004). It's all about attitude: revisiting the technology acceptance model. Decision Support Systems, 38(1), 19-31.

Yeniyurt, S., & Townsend, J. D. (2003). Does culture explain acceptance of new products in a country?: An empirical investigation. International Marketing Review, 20(4), 377 - 396.

Yoon, C. (2009). The effects of national culture values on consumer acceptance of e-commerce: Online shoppers in China. Information & Management, 46(5), 294-301.

Zakour, A. B. (2004). Cultural differences and information technology acceptance. Paper presented at the Annual Conference of the Southern Association for Information Systems, united state.