Perceive Intention of Using Mobile Payment Systems: Apple Pay

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In recent years, mobile payment market grows significantly due to commercial competition and government support. According to Gartner's research, the global mobile payment market is expected to grow from US$ 4,311 billion in 2015 to US$ 7,214 billion in 2017. This study utilized Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) to explore the consumers' intention of using Apple Pay mobile payment system. According to the research, six factors (Perceived Privacy Protection, Perceived Security Protection, Positive Reputation, Risk, Consumer Disposition and Trust) are key to measure consumers' intention of choosing Apple Pay for mobile payment. Convenient sampling was used to collect electronic questionnaire and total amount of valid questionnaire was 172. The results show all factors are significant and "Perceived Security Protection" factor is the most related.

Keywords: mobile payment, Apple Pay, Intention, Perceived Security Protection.

1. INTRODUCTION

Over 50 years, credit cards have adopted a "card-based" trading patterns. The consumer shows the card to the store counter, the store counter gets consumer's credit information by credit card machine, and then the issuing bank confirms authorization and quota. After successful authorization, the consumer signs one receipt, the store counter confirms the signature and gives another receipt to consumer. The two sides each hold a receipt for future reference. The way to use the credit card changes constantly. From the mechanical copying into a magnetic stripe reader, the current device is based on IC chips. Improvement and evolution of these technologies are to avoid the risk of trading patterns that may arise. Usually there are two common risks on a credit card, "counterfeit cards" and "fraudulent." Fraudulent card is fraudulent use of someone else's credit card. Cardholder should report the missing of credit card. During the bill authorization of credit card, the store counter would identify the signature. Therefore, credit card owners, stores and banks, three of them would share the risks and losses. Besides, in order to reduce the number of counterfeit cards, banks started with the standard, EMV (Europay, MasterCard and Visa) chip on credit cards since 2004. Through the promotion of EMV equipment in Europe, it has proven to be effective in reducing the chance of fraud which happened in stores.

However, the rise of Internet and e-commerce, card-centric trading patterns started waves of reformation. Unable to deliver the credit card to the other end of network through the Internet, traditional physical delivery of the credit card becomes the delivery of information, but also it becomes very easy to leak the confidential information of the owners of credit card. Therefore, the credit card payment process needs to face a big change. At the same time with the popularity of mobile network systems, research and development units began trying to combine mobile communication devices and wireless communications, combining smartphones and wireless communication technology, and then integrated the electronic ticket payment system into the mobile phone. This technique combined the SIM card, the mobile phone features of "easy to carry", and the "Near Field Communication" (NFC) technology or Bluetooth system, and let people make transactions by convenient way. However, there are many problems to be overcame, such as how to ensure the safety of complex information and communications between stores and issuing bank, limitations of legislation and regulations and so on. On consumer services, it is usually the topics to study how to link credit card information to telecommunication companies and bank efficiently and safely by mobile phone.

2. THEORETICAL BACKGROUND

2.1 Risk

The perceived risk is an important key that how consumers use mobile payment system. There have been many literatures investigated perceived risk. Jacoby and Kaplan (1972) did for 7 types of risk classification: financial, performance, physical, psychological, and social opportunity cost risk. Mobile payment system is exposed to three risks (Belanger, 2000): financial risk, product risk and privacy risk. Financial risk includes the time and opportunity costs. The irregularity of mobile payment system may also cause erroneous or repeat purchase. Product risk is the risk associated with the product, such as the product itself peccadilloes. Privacy risk refers to the occurrence of leakage of personal data or theft brush of credit card (Fram, 1997) during the process of the credit card transactions.

Consumers perceived the risk of being cognition will affect the various consumption patterns of men and women (Antony, 2006). Consumers generally do not want to use a credit card to buy because the risk of using a credit card payment model is much greater than traditional cash trading patterns. However, the public tends to think that to use a credit card through a mobile device is higher risk. R. Bauer (1960) mentioned the perceived risk: because of unpredictable results may become unpleasant consequences, it will have perceived risk during the process of buying. In this research, the definition of risk (perceived risk) is the opposite with the intention of consumers who use mobile payment system. When consumers feel the risk is higher, the intention to reject using mobile payment system is higher. During transaction process, fearing of outflow payment information, credit card theft brush and the cost of the time while defective goods return, will go directly to affect the willingness to use.

Therefore, assumption was made:

H1: Perceived Risk has significant negative impact to Intention.

2.2 Trust

Since there will be some risks while using mobile payment system, consumers do not trust stores, banks and Internet. This is often the biggest obstacle to promote the mobile payment system. Gambetta (1998) pointed out that the trust is particularly critical for the unknown or uncertain thing. Therefore, how to make consumers trust the system has become an important key to the success of the system.

Many scholars have done studies for trust. Mayer, Davis and Schoorman (1995) defined trust as the behavior characteristics of a person who believes the actions of others. According to this definition, Mayer et al. presents a trust model which includes the effects of features from both the trustor and the trustee. This model includes the following characteristics: Trust comes from the trustor who believe in the trustee's capacity, integrity and good faith. Capacity means the payment system industries can provide effective knowledge and skills to complete the payment process. Honesty is the payment system industries to fulfill the commitment to consumers. Goodwill refers to the payment system industries will take care of the interests of consumers, and will not go for their own interests to conceal, deceive consumers or obtain improper profits.

Many studies have shown that trust can affect intention of behavior and perceived risk (Beldad, 2010; Slyke, 2010). When consumers can not completely understand the payment process, enhance consumer's trust will reduce consumer's perceived risk. If the industry's capacity, integrity and goodwill can be trusted by consumers, it will substantially increase the willingness of consumers to use the mobile payment system. Views of the above, assumptions were made:

H2: Trust has significant negative impact to Perceived Risk.

H3: Trust has significant positive impact to Intention.

2.3 Perceived risk and risk antecedents

Consumers' perceived risk and trust will directly affect the intention of consumers. Through analysis of the intention factor, the factors that influence consumers' perceived risk and trust were appeared. In the traditional consumption patterns, the way to build trust is through interactive contacts between staff and customers. The company's images in public, distinguishing features, commercial reputation… will directly affect the awareness of perceived risk and the building up of trust (Doney, 1997). This study suggests that there are three types of antecedents which will directly affect the mobile payment system:

Cognition Effects: For example, protection of privacy, protection of security, quality of information… and so on.

Relationship Effects: For example, positive reputation, third-party certification, consumer recommendations, words of mouth … and so on.

Personality Effects: For example, consumption mode, trust… and so on.

Cognition, mainly is related to consumer perception of the payment system, privacy, system security …and so on. System functions and corresponding mechanisms will directly affect consumers' perception of risk and trust (McAllister, 1995).

Relationship, refers to the company's reputation, word of mouth after consumers using the products and recommendations from friends and relatives. Those all will directly affect the promotion of system (McAllister,1995).

The last, personality is part of the consumers' shopping habits. This aspect is quite stable for consumers and mobile payment system is more difficult to influence that.

This study focuses on consumer trust in mobile payment systems and purchase intention, therefore, will focus on the cognition and relationship effects. After that, personality effects will be considered as well. Specifically, the study of cognition effects will focus on "privacy protection" and "security awareness", because they are both which affected most directly to consumers and system. Relationship effect is focused on the company's reputation. Consumers' cognitions of "company's reputation" will directly affect the perceived risk and trust. "Customers trust" represents the acceptance of personality trust. According to the perceived risk and trust antecedents and to combine with the theoretical framework, mobile payment system for consumer decision-making model was established.

2.4 Cognition effect affects perceived risk and trust

Perceived Privacy Protection(PPP) refers to the mobile payment system companies would protect consumers' personal information, such as name, address, telephone number, purchase information, etc. The process of consumption avoids the outflow of information that may lead to spam, telephone merchandising, and even credit card theft brush (Ratnasingham, 1998). Therefore, privacy is very important for many people who want to use mobile payment system. According to the survey of research literature, 92% of consumers do not think that system companies can protect their private information, even system companies committed to protect personal privacy (Light, 2001). So if system companies increase privacy protection, consumers would trust system companies more. In contrast, consumers believe that system companies should protect consumers' privacy and should not forward personal information to the illegal usage. If consumers do not believe the system companies would protect consumers' privacy, they would feel a greater risk while using this system. Based on the above points, the following assumptions were made:

H4: Perceived Privacy Protection has significant negative impact to Perceived Risk.

H5: Perceived Privacy Protection has significant positive impact to the Trust.

Perceived Security Protection (PSP) is that consumers believe mobile payment system can provide the security requirements for consumers. This includes encryption, authentication, irreplaceability and so on. How consumers understand the security equipment which depends on system companies (Friedman, 2000). When consumers think the system companies provide adequate equipment, it will improve the consumers' intention to use the system. Security equipment will increase consumers' trust in the system and consumers will reduce perceived risk during transactions. This study presents the following assumptions:

H6: Perceived Security Protection has significant negative impact to Perceived Risk.

H7: Perceived Security Protection has significant positive impact to Trust.

2.5 Relationship effect affects perceived risk and trust

Companies' positive reputation is considered to reduce the perceived risk (Antony, 2006) and an important factor in creating consumers' trust (Doney, 1997). Because the system is the company's reputation in the past, consumers may represent the last evaluation of the company. Because of the

company's good reputation, consumers tend to believe that the company can provide more protection, and is trustworthy. If the company's reputation is not good, consumers will think the company can not fulfill its commitments, and that the company can not be trusted, which will substantially increase the perceived risk. According to this conclusion, consumers would tend to choose to companies which kept the promises. Based on the above conclusion, this study proposes the following hypothesis:

H8: The Positive Reputation has significant negative impact to Perceived Risk.

H9: The Positive Reputation has significant positive impact to Trust.

2.6 Personality effect affects perceived risk and trust

Customers disposition to trust(CDT) is the consumers' attitudes to treat others, whether to take the idea of trust (Gefen, 2000). Different cultural backgrounds, growth environment and personalities of consumers, the tendency of trust would be different. This tendency is not particular experience or specific knowledge, rather than socialization and their own experience accumulated (McKnight, 1998). If consumers have a higher CDT, it will directly affect the consumers' trust. Conversely, if consumers have a lower CDT, it is difficult for consumers to build trust. Therefore, the research proposes the following hypothesis:

H10: The Consumer Disposition to Trust has significant positive impact to Trust.

3. RESEARCH DESIGN

Through the discussion of motivation and related literature, we will then develop the research structure and describe the operational definition and measurement methods for variables. The design of questionnaires would be conducted and data would be collected. At last, data analysis would be processed to verify the results.

3.1 Research structure and hypothesis

The study aims to use risk assessment and trust model to explore the attitude, behavioral intentions and influencing factors of domestic people to use Apple Pay to build a more secure mobile payment environment, and explain correlation of factors.

In exploring the past studies of mobile payment environment, it was often only investigating consumers' acceptance of e-commerce. This theory is often applied by Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM). However, it ignored the impact of e-commerce safety risk assessment for consumers. This study focused on the theme that consumers assess the risk of Apple Pay. After refer to the relevant literatures and found many scholars agree that while exploring e-commerce payment systems, consumers' perceived risk is the main factor which affects the acceptance of consumers. Therefore, look for factors that influence consumer acceptance from relevant literatures would be the future research. Questionnaire was conducted to understand the inter-connected nature of the factors which builds for the future research and provide to the relevant government departments and industry as a reference. In this study, smartphone users are the target samples of the survey. In view of the user to explore the perceived risk, trust, images, etc. which affects the attitudes of users and intention of behaviors, interaction relationship was explored.

In this study, Basic theoretical framework is combined with Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM).

The following model is the research structure：

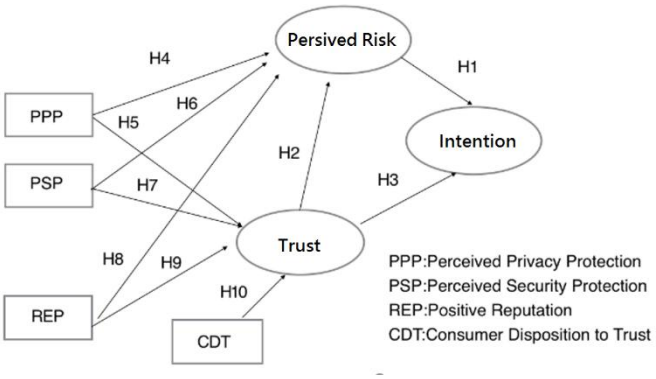

Figure 1: The structure of research.

H1: Perceived Risk has impact to Intention

H2: Trust has impact to Perceived Risk.

H3: Trust has impact to the Intention.

H4: Perceived Privacy Protection has impact to Perceived Risk.

H5: Perceived Privacy Protection has impact to the Trust.

H6: Perceived Security Protection has impact to Perceived Risk.

H7: Perceived Security Protection has impact to Trust.

H8: Positive Reputation has impact to Perceived Risk.

H9: Positive Reputation has impact to Trust.

H10: Consumer Disposition to Trust has impact to Trust.

3.2 Operational definitions and measurement methods of research variables

The variables include "Perceived Risk", "intention", "Perceived Privacy Protection", "Perceived Security

Protection", "Positive Reputation", "Trust" and "Consumer Disposition to Trust". The research questions of questionnaire mainly refer to DeLone and McLean's "Model of IS Success" (2003), "Technology Acceptance Model" and other information which sorted out the conceptual model. Accordingly, this research designed the survey by different factors. Questionnaire used a five-point Likert scale assessment as "strongly agree", "agree", "no opinion", " disagree " and " strongly disagree " and scored from 1 to 5 po ints.

3.3 Data analysis methods

In this study, the statistical software, SPSS with version 22, used as tool to analysis the data of questionnaires. Analytical methods including descriptive statistics analysis, reliability analysis, validity analysis, correlation analysis and regression analysis.

4. Results and discussion

Table 1: Pearson correlation analysis.
All correlation coefficients were significant, except that between PPP and REP.

Variable	1	2	3	4	5	6	7
1.REP	1						
2.PSP	.621**	1					
3.Trust	.621**	.743**	1				
4. CDT	.474**	.455**	.597**	1			
5. PPP	.111	.333**	.285**	.101**	1		
6.Perceived Risk	-.295**	-.500**	-.463**	-.269**	-.581**	1	
7.Intention	.494**	.728**	.599**	.517**	.250**	-.381**	1

4.1 Antecedents of perceived risk and trust

On the payment system, the awareness of perceived risk and establishment of trust has three antecedents: cognition effect, relationship effect and personality effect. System to improve customer privacy protection, enhance the company's reputation and improve system safety can reduce perceived risk and increase trust.

4.2 Perceived risk has significant negative impact to intention.

On the payment system, the analysis found that perceived risk will significantly influence an intended user to use the system. Bauer (1960) mentioned the perceived risk: While consumers can not expect the unpleasant result and face the uncertainty, the perceived risk occurs. Furthermore, it would influence the willingness of user to use the system. For example, if consumers feel the process of the payment system is insecure and loss possibly, consumers will directly concern the safety of the system. In other words, consumers would evaluate not only the risk but also the problems and difficulties of the system. Therefore, to enhance the security of payment systems and reduce the perceived risk of the consumer is possible to enhance the willingness of consumers to use the system.

4.3 Trust has significant impact to risk and intention

The results showed that "trust" factor of mobile payment systems significantly influences consumers' willingness to use and the quality of services provided. Gambetta (1998) believed that the trust is particularly critical for the unknown or uncertain thing. So how to get consumers to believe the system is the key to make the system success. The researches from Beldad et al. (2010), Luo et al. (2010) and Slyke et al. (2010) had shown that trust can affect behavior intention and perceived risk. In addition, Mayer (1995) mentioned that trust comes from the trustor who believes the trustee's ability, integrity and goodwill. Based on this concept and empirical research, it can be expected that how the level of willingness of consumers to use mobile payment systems will depend on how the level of consumers trust in the system. Consumers would accumulate experience and cognition. If the trust of system is low, the willingness to use this system is low. Conversely, when consumer trust the system more, the willingness to use the system is more. In this study, the correlation coefficient of Pearson correlation analysis is up to .743 between trust and intention, and -.500 between trust and perceived risk. Therefore, to increase the trust of system would reduce the perceived risk and increase the willingness to use the mobile payment system.

5. CONCLUSIONS

5.1 Research conclusion

After testing hypotheses, all the assumptions in the model were confirmed as true, as below.

Table 2: The results of hypothesis test.
All hypothesis tests were significant.

Hypothesis	Content	Result
H1	Perceived Risk has significant negative impact to Intention	True
H2	Trust has significant negative impact to Perceived Risk.	True
H3	Trust has significant positive impact to the Intention.	True
H4	Perceived Privacy Protection has significant negative effect to Perceived Risk.	True
H5	Perceived Privacy Protection has a significant positive impact to the Trust.	True
H6	Perceived Security Protection has significant negative effect to Perceived Risk.	True
H7	Perceived Security Protection has significant positive effect to Trust.	True
H8	The Positive Reputation has significant negative effect to Perceived Risk.	True
H9	The Positive Reputation has significant positive effect to Trust.	True
H10	The Consumer Disposition to Trust has significant positive effect to Trust.	True

5.2 Management implications

Based on the findings and conclusions, the following implications on the management were made:

1. To use the fame of company's safety which let consumers understand the advantages and security of the system.

Starting from iPad, Apple company re-created the company's brand position and gave the impression of secure operating system. Apple often represents the brand of fashion and trends, moreover, there are groups of brand enthusiasts. In addition, Apple has a complete and robust control of the supply chain. Through the upstream and downstream integration of hardware, application software and application services, this huge platform provides a complete user experiences, enhances the sustainable development of the industry, forms a virtuous cycle of industry, creates a network effect, increases the migration cost of ownership and enhances user loyalty.

From the aspects of user's habits, loyalty and purchasing products, Apple users possess a very strong network effect. In 2013, Apple had more than 600 million iOS accounts and most of which were bounded to the credit card account. Most of iOS users spends high amount and are also potential users of mobile payment, comparing to only 100 million users of Paypal, the world's leading online payment company. Furthermore, the loyalty of iPhone users is high. 91% of iPhone users will continue to use while only 6% want to migrate to Android.

So Apple company had better take advantages of these superiorities. Not only establishing payment system to new mobiles, but also aiding users to perceive the safety and convenience of Apple Pay, and increase the significant scope of usage. According to the results of this study, if consumers believe the system is safe, it can greatly increase the user's willingness to use, and even share good experiences. After a substantial increasing in the expansion efficiency of the system and achieving a relative large scale, it can increase the utilization of the system.

Of course, the purpose of Apple company is not to make the profit through these business items, but to increase customer support for the brand by the success of mobile payment system. Even more, through the consumption record analysis, the company can understand global market needs of customers, refer that for the company's future business development and improve future products.

2. To improve ease and willingness of use of consumers.

Apple Pay mobile payment system in Taiwan is an innovative technology. While concerning innovative technology, how it makes the impact to future life and whether it will affect the habits now are the scales to measure acceptance. Therefore, the implementation of mobile payment systems should integrate into the user's habits, increase ease of usage and reduce complexity to improve consumers' willingness to use. According to statistical results of this study, due to the large number of knowledge was transferred by network, age is not the factor to affect acceptance of mobile payment. The main factor is to make consumers more understanding of the system. According to the conclusion of analysis, "Perceived Privacy Protection", "Perceived Security Protection", "Positive Reputation" and "Trust" have significant negative effect to "Perceived Risk" and significant positive effect to "Trust". Thus, Apple company has a brand advantage. To strengthen the "Perceived Privacy Protection" and "Perceived Security Protection" will be able to increase the willingness to use the system and involved the services into consumers' lives. Both of the number of users increases and word of mouth creates relationship effect can help the success of the system.

Overall, the assumptions of this research model for consumers to use Apple Pay are significant. Positive

Reputation, Perceived Security Protection and Perceived Privacy Protection can enhance consumers' Trust, reduce the Perceived Risk, and directly affect the willingness to use. If the popularity of mobile payment system is important, the increasing of the rate of introduction of the store is important as well. Fortunately, the system can use the NFC device which is spread widely already. Besides, Apple company announced Square type of inductive chip card reader at Developer Conference in June 2015. This device only needed 49 dollars which let consumers connect iOS or Android devices to card reader by Bluetooth function. When the consumer checkout, iPhone or Apple Watch will be able to process the payment. All the efforts will make the Apple Pay easy to be used and to success.

5.3 Research limitation

Limitations of this study are as follows:

1. Research Objects and results

Apple Pay has not been formally launched in Asia, especially Taiwan government is still pending the relevant legislations. Therefore, collecting real data of usage and perception of Apple Pay can not be complied recently. Therefore, this study investigated the consumers' cognition of mobile payment system. Sometimes the lack of information leads to bias of the survey results. In addition, the questionnaires mainly went to consumers who appeared around university areas, especially focused on the students and manufacturing industries. According to demographic variables analysis, there is no significant features but still possible to appear the sample bias. So when inferring to more research samples, reliability is uncertain for further verification. Meanwhile, the inference of results to infer to more research samples is uncertain for further verification as well.

2. Research variables

The questionnaire used in this study referred to foreign authors and the content is modified to achieve the intentions of the original questionnaires. It is uncertain to achieve the intentions of original literatures as well.

3. Research methods

This research used questionnaires to collect data and it was difficult to control the rigor of people's attitudes who filled the questionnaires.

5.4 Suggestions for further research

This section proposes future research recommendations:

1. Research Objects

In the questionnaires of this study, the author's friends and family around were involved in. If the future studies, a larger number of samples can be extended which can be analyzed to compare the differences and make research results more representative and contributive.

2. Research variables

This study came from Kim, Donald and Rao's (2008) literature. The future studies may consider other relevant variables, in-depth analysis of the results for each variable and the increase of research extension and variability.

3. Research methods

This research used questionnaires to collect data and it is a self-report scale. Greenwald, McGhee and Schwartz (1998) agreed that self-report scale can only measure the explicit attitudes but not implicit attitudes. Thus, people who took the test may be influenced by subjective and objective factors, hide the intentions and made distortion of the questionnaires. The future research may conduct the interview to understand the user's ideas and get better results.

REFERENCES

Ajzen, I. (1991). *The theory of planned behavior.* Organizational behavior and human decision processes, 50(2), 179-211.

Ajzen, I. (2011). *Theory of planned behavior.* Handb Theor Soc Psychol Vol One, 1(2011), 438.

Antony, S., Lin, Z., & Xu, B. (2006). *Determinants of escrow service adoption in consumer-to-consumer online auction market: an experimental study.* Decision Support Systems, 42(3), 1889-1900.

Bauer, R. A. (1960). *Consumer behavior as risk taking.* Dynamic marketing for a changing world, 398.

Belanger, F., Hiller, J. S., & Smith, W. J. (2002). *Trustworthiness in electronic commerce: the role of privacy, security, and site attributes.* The journal of strategic Information Systems, 11(3), 245-270.Bhatnagar, A., Misra, S., & Rao, H. R. (2000). *On risk, convenience, and Internet shopping behavior.* Communications of the ACM, 43(11), 98-114.

Beldad, A., De Jong, M., & Steehouder, M. (2010). *How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust.* Computers in Human Behavior, 26(5), 857-869.

Bilkey, W. J. (1953). A psychological approach to consumer behavior analysis. Journal of Marketing, 18(1), 18-25.

Bilkey, W. J. (1955). *Psychic tensions and purchasing behavior.* The Journal of social psychology, 41(2), 247-257.

Chen, M. S., Han, J., & Yu, P. S. (1996). *Data mining: an overview from a database perspective.* IEEE Transactions on Knowledge and data Engineering, 8(6), 866-883.

.

DELONE, W. H., & MCLEAN, E. R. (2003). *The DeLone and McLean Model of Information Systems Success: A Ten-Year Update.* Journal of Management Information Systems, 19(4), 9-30.

Doney, P. M., & Cannon, J. P. (1997). *An examination of the nature of trust in buyer-seller relationships.* the Journal of Marketing, 35-51.

Fishbein, M. (1979). *A theory of reasoned action: some applications and implications.* Nebraska Symposium on Motivation, 27, 65-116.

Fram, E. H., & Grady, D. B. (1997). *Internet shoppers: Is there a surfer gender gap?.* DIRECT MARKETING-GARDEN CITY-, 59, 46-51.

Friedman, B., Khan Jr, P. H., & Howe, D. C. (2000). *Trust online.* Communications of the ACM, 43(12), 34-40.

Gambetta, D. (2000). *Can we trust trust.* Trust: Making and breaking cooperative relations, 13, 213-237.

Gefen, D. (2000). *E-commerce: the role of familiarity and trust.* Omega, 28(6), 38-53.

Hanafizadeh, P., Behboudi, M., Koshksaray, A. A., & Tabar, M. J. S. (2014). *Mobile-banking adoption by Iranian bank clients.* Telematics and Informatics, 31(1), 62-78.

Harris, M. A., Brookshire, R., & Chin, A. G. (2016). *Identifying factors influencing consumers' intent to install mobile applications.* International Journal of Information Management, 36, 441-450.

Jacoby, J., & Kaplan, L. B. (1972). *The components of perceived risk.* In SV-Proceedings of the third annual conference of the association for consumer research, 3, Page 382-383.

Jarvenpaa, S. L., Tractinsky, N., & Vitalec, M. (2000). *Consumer trust in an Internet store.* Information Technology and Management, 1, 45-71.

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). *A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents.* Decision support systems, 44(2), 544-564.

Kohli, A. (1989). *Determinants of influence in organizational buying: A contingency approach.* The Journal of Marketing, 50-65.

Lewin, K. (1943). Fo*rces behind food habits and methods of change.* Bulletin of the national Research Council, 108, 35-65.

Light, D. A. (2001). *Sure, you can trust us.* MIT Sloan Management Review, 43(1), 17.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). *An integrative model of organizational trust.* Academy of management review, 20(3), 709-734.

McAllister, D. J. (1995). *Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations.* Academy of management journal, 38(1), 24-59.

McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). *Initial trust formation in new organizational relationships.* Academy of Management review, 23(3), 473-490.

Moorman, C., Deshpande, R., & Zaltman, G. (1993). *Factors affecting trust in market research relationships.* the Journal of Marketing, 81-101.

Ratnasingham, P. (1998). *Internet-based EDI trust and security.* Information Management & Computer Security, 6(1), 33-39.

Shaikh, A. A., & Karjaluoto, H. (2015). *Mobile banking adoption: A literature review.* Telematics and Informatics, 1(32), 129-142.

Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). *The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research.* Journal of consumer research, 15(3), 325-343.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics, 5th.*Needham Height, MA: Allyn & Bacon.

Van Slyke, C., Lou, H., Belanger, F., & Sridhar, V. (2010). *The influence of culture on consumer-oriented electronic commerce adoption.* Journal of Electronic Commerce Research, 11(1), 30-40.

Venkatesh, V., & Davis, F. D. (2000). *A theoretical extension of the technology acceptance model: Four longitudinal field studies.* Management science, 46(2), 186-204.