

The Impact of the Users' Seek Values on Consumer Intention to Use SST in Multiple Service Industries in Saudi Arabia

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Abstract

This study investigated the effect of users' seek values on consumer intention to use SST in multiple service industries in Saudi Arabia. The sample consists of 400 sample units where data is gathered with the help of a questionnaire. The study employed regression analysis to examine the independent variables-dependent variables relationship. Moreover, the outcome of the study revealed that a positive and significant association is present between user's seek values and consumer intention to use SST. The research provides limitations and suggestions for future research before the study is concluded.

Keywords: users' seek values, consumer intention to use SST and service industries in Saudi Arabia

1. Introduction

Over the past decade, self-service technologies have increasingly come to the fore and as a consequence, technology-based interactions are predicted to become an important element for the successful service delivery in the service industry of retailing and hospitality (Meuter et al., 2000) in the near future. It is not surprising that tourism and technology are two of the top fastest growing industries around the globe (Sheldon, 1997). Added to this, self-service technology is predicted to become a part of our day to day lives as service providers all around the world continue their efforts to search for ways to lower their costs but at the same time heighten their service quality for market competitiveness.

In the past decades, firms have significantly maximized their investment in information technology (Ndubisi, 2005) and thus, in the context of retail banks, in order to satisfy various customer needs and obtain competitive edge, they have invested quite a significant amount in IT. This is evidenced by the fact that Global Information Technology (IT) spending by financial entities was reported to reach US\$351.2 billion in 2008 alone, with a predicted growth rate of 5.1%.

In the current dynamic era, technologically-based service concept, customers provide themselves with service through technology with the help of an employee of the service provider or without it (Meuter, Ostrom, Roundtree & Bitner, 2000; Reda, 2000; Henderson, 2001). The commonly used self-service technologies in the current times include; telephone-based technologies and interactive voice response systems, direct online connections and Internet-based interfaces, interactive freestanding kiosks, and video/CD technologies (Bitner, Ostrom, & Meuter, 2002). Specifically, these technologies throughout service industries include vending machines, ATMs, e-kiosks for baggage check-in or boarding pass at the airports, room check out at hotels, e-blood pressure checking devices, automated car rental technologies, touch-free e-care washers, automated telephone services, self-checkout systems in retail stores, e-self-ordering systems in restaurants (fast food) and service computers having Internet connections at the airports (Kotler, 2000; Meuter, Ostrom, Roundtree, & Bitner, 2000; Carlin, 2002; Harler, 2002; Wright, 2002).

Strategically, the deployment of sophisticated self-service technologies in service encounters is expected to increase consumer satisfaction through improved service quality (Bitner, Brown, & Meuter, 2000; Parasuraman & Grewal, 2000) while cutting costs at the same time (Weijters, Rangarajan, Falk, & Schillewaert, 2007). Self-service technologies enable retailers the standardization of their consumer interaction, which leads to a

steady service atmosphere that is devoid of employee personality and mood (Hsieh, Yen, & Chin, 2004). This type of technology also enables consumers to be productive and involved in the delivery of service, which allows retailers' handling of demand fluctuations without having to deal with costly employee levels adjustment (Curran, Meuter, & Surprenant, 2003).

Among the many self-service technologies, e-banking is considered to be one of the most successful consumer applications in e-commerce (Pousttchi & Schurig, 2004). Initially, research on self-service technologies focused on the consumers' attitudes regarding ATM (Rugimbana & Iversen, 1994; Rugimbana, 1995; Davies et al., 1996; Filotto et al., 1997; Moutinho & Smith, 2000). Current studies have embarked on an analysis of the telephone banking development (Lockett & Littler, 1997; Al-Ashban & Burney, 2001) and personal computer (PC) banking (Mols, 1998). However, recently, research on e-banking has concentrated on Internet banking (Polatoglu & Ekin, 2001; Black et al., 2002; Karjaluoto, 2002; Mattila et al., 2003; Gerrard & Cunningham, 2003) including the multiple service transaction option through the Internet.

As elaborated in the previous section, despite the advent of these innovative self-service technology that was designed to enhance lifestyles and facilitate the accomplishment of the consumer daily activities, consumer acceptance and their actual adoption of self-service technologies has been viewed to be lagging and less that it should and more importantly, the number of consumers using these services has not increased to the degree expected (Flavian et al., 2004). This is exemplified by the case of the United States of America where millions are not using the e-banking technologies, nor do they expected to do so in the near future (Kolodinsky & Hogarth, 2001; Wang, Lin, & Tang, 2003). In this context, Anguelov, Hilgert, & Hogarth (2004) stated that less than 25% of households were engaged in some form of e-banking activities, which is a form of self-service technologies. This suggests that nearly 75% of households were still using some form of in-person banking as many of these households expressed their lack of trust for using online banking transactions and preferring face-to-face dealings with bank employees in their working places.

The self-service technology literature lacks theory to guide empirical work (Wheeler, 2002). Hence, it is important that research is carried out in this subject as the findings would offer an insight on the factors that influence consumers' resistance to self-service technology adoption in various service industries. Therefore, to respond to these challenges, there is a need for an empirically relevant but also theoretically rigorous framework. Specifically speaking, majority of studies on consumer technology adoption have made use of the Technology Acceptance Model (TAM) for their theoretical framework (Davis & Venkatesh, 2000; Gefen, Karahanna, & Straub, 2003; Monuwe, Dellaert, & Ruyter, 2004; Ramayah & Lo, 2007; Lee, 2010). However, TAM has no construct, which represents an overall estimation of the adoption object (Kim, Chan, & Gupta, 2007). The model only explains adoption behavior with two factors namely ease of use and usefulness. Thus, there have been calls by researchers to expand the theoretical framework of SST studies to include other theories that could provide deeper understanding of the factors that influence SST adoption among consumers (Kim et al., 2007). This study attempts to respond to such calls by grounding the study on a recent theoretical framework based on the values consumers associate when making decisions to adopt SST. This theoretical framework is grounded on consumer perceived value.

2. Literature Review and Hypotheses Development

2.1 Users' Seek Values and Consumer Intention to Use SST

It has been argued that users' seek values influence their intention to use SST (Auh et al., 2007) and at the same time consumers' intention to use SST influences their SST adoption (Karahanna, Straub, & Chervany, 1999; Korzaan, 2003). Taking into account these links that are supported by the literature, it could be argued that a possible mediating relationship could exist in the relationship concerning users seek values and their SST adoption. This influence is done due to the mediating impact of consumers intention to use SST on the relationship between users seek values and their SST adoption. Consumer motivation to use the SST constitutes as the final motive whether or not to opt for self-service. This is known as values or needs expected from the customer of the particular self-service options. Despite of the differences in individual preferences specifically in the customers' needs and wants, there are some common needs and wants among them (Van Hagen, 2006). The most important desired outcomes of bank customers when determining the differences in customer value perceptions between Internet and mobile banking are efficiency and convenience (Laukkanen, 2007). There are various 'values' sought by the consumers in adopting the SST such as 24/7 service availability, location free access and service access speed that reflect solid attributes of e-channels.

Time savings and easy-to-use concepts represent the advantages or consequences derived from the use situation. Finally, concepts like convenience, security and privacy represent more abstract desired end-states of consumers.

These concepts should be treated as different level constructs that are linked to each other hierarchically. In the view of consumer value perceptions, value can be developed on various levels of abstractions and can stem from different factors (Laukkanen, 2006). Consequently, it is pertinent that the customers' desired end-states in the consumption of self-service technology services that link the products/services consumption and individual's personal values are investigated (Huber et al., 2001).

There is a prevailing value that the self-service facilities must be accomplished before the user evaluates the next list of values or attributes offered by the service provider. Völlink et al. (2002) claimed that potential adopters are interested only in the perceived benefits of an innovation. Adopters prefer to focus on improving the perceived benefits to increase the possibility of adoption (Plouffe, Vandenbosch, & Hulland, 2001). Customers will evaluate the intervention on the basis of other attributes only when they perceived that the benefits gained are sufficiently high. When the benefits are perceived as unimportant, the evaluation process is stopped. As a result, we believe that there is a prevailing end value that determines the adoption of SST.

We argue that the decision making in the SST adoption is a stepwise process in which prevailing seek value is a cognitive indices or beliefs and is reflected in the attitude displayed towards the innovation as stated by Rosenberg and Hovland (1960) and Le Bon and Merunka (1998). Hence, the reason behind the establishment of SST is to comply with consumers' expectations and these could be time/cost savings, convenience or even autonomy (Bitner, Ostrom, & Meuter, 2002). SSTs success is also attributed to the benefits they provide such as time and monetary savings, easy to use, and availability, and these benefits also vary based on the type of consumer (Zeithaml et al., 2006; Meuter et al., 2000).

Consumers choose to use self-service technology for a variety of reasons that benefit them. Among the many advantages are time and cost savings, higher control over the delivery of service, minimized waiting time, greater perceived level of customization (Meuter & Bitner 1998), location convenience (Kauffman & Lally 1994), experienced fun/enjoyment from technology use (Dabholkar, 1994, 1996), along with efficiency, spontaneous delight and versatility (Bitner, Brown, & Meuter, 2000). In addition, customers may find the technology-based options attractive for many reasons; they are easy to use, they are convenient compared to other options, they allow avoidance of contact with employee of service providers (Meuter et al. 2000).

Self-service technologies can provide consumers greater convenience, accessibility, and ease of use. Convenience include: business available 24 hours a day, seven days a week. SST often empowers the consumer to use the technology as they have control over the service interaction and are not confined by time or pressured. Co-production also benefit customer in several ways including: reasonable prices, greater opportunities for options, greater discretion concerning the final product configuration, minimal waiting times, and a higher potential for customization (Auh et al., 2007). Based on this argument, this study hypothesize that users seek values influence the consumer behavior intention to use SST. Therefore, the hypothesis proposed is:

Hypothesis: There is a positive relationship between Users seek values and consumers' intention to use SST.

3. Research Method and the Study Model

A research design refers to the research structure that presents the measures, samples, methods of data collection, and analysis of work and it explains the main research questions. The present study goes about achieving the research aims via descriptive correlational study method where the effect of users' seek values on consumer intention towards using SST are identified among several industries in Saudi Arabia. The researcher develops the methodological basis of the study by utilizing the factors that affect users' seek values and consumer intention to use SST in various industries in Saudi Arabia.

In research methods, the quantitative approach is described as a systematic empirical study of the quantitative properties and the phenomenon under study, as well as the linkage between them. It involves the use of numerical measures and is appropriate for empirical studies are developed to test hypotheses. Added to this, a quantitative study is conducted to create and use mathematical models, theories, and hypotheses concerning the phenomenon under study. The measurement process is the basic element in a quantitative study as it highlights the relationship between empirical observation and the mathematical equation of quantified relationships.

In addition, sampling is referred to as a process of unit selection – that is, the selection of individuals or organisations from the general population and the investigation of the sample allows the researcher to conduct a generalisation to the population at large. In this regard, a sample refers to a selected group of people that is deemed to be a part of the study. It is the use of a subset of population to represent the population at large. Literature highlights many sampling methods and the two major ones are non-probability and probability type of sampling. The sampling type chosen should be aligned to the study in order to ensure that the sample reflects the

perception of the whole population for generalisation purposes to different periods and circumstances.

In this regard, non-probability sampling refers to a method of sampling wherein a few individuals have the probability to be chosen whereas the probability sampling refers to one where all individuals have equal probability to be chosen and included in the sample. The present study makes use of the probability sampling as the non-probability one is not suitable and practical to be utilized in the study.

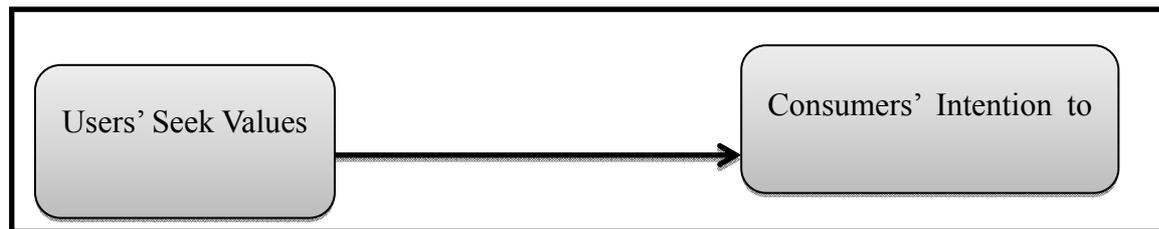


Figure 1. Research framework

3.1 Measurements of Instruments

User's seek values are gauged via convenience and accessibility as gauged by Wolfinbarger and Gilly (2001), time saving, effort saving, flexibility, cost saving, greater control, minimized waiting time, heightened customization, suitable location, enjoyment, efficiency, flexibility, ease of use, 24/7 service, devoid of pressure and with privacy protection. Additionally, behavioural intention to use SST refers to the intention to use the facilities of SST. The above items are obtained from prior studies (i.e. Dabholkar, 1996; Dabholkar & Bagozzi, 2002).

4. Data Analysis and Results

Data collected is analysed with the help of IBM SPSS to provide data description and to test the proposed hypotheses.

4.1 Descriptive Statistic

The descriptive statistics results of continuous variables obtained through SPSS, version 21, are presented in Table 1 – they include mean, standard deviation, minimum and maximum.

Table 1. Descriptive statistics of continuous variables

| Variables | Mean | Std. Deviation | Min | Max |
|-----------|-------|----------------|------|------|
| USV | 3.819 | 0.5252 | 1.62 | 5.00 |
| CIUS | 3.941 | 0.6640 | 1.00 | 5.00 |

4.2 Testing the Normality of the Error Terms

Normality forms the symmetrical curve that has the highest frequency of scores lying in the small and medium frequencies' extremes (Pallant, 2011). Normal scores distribution according to Kline (1998) and Pallant (2011), can be examined for the independent and dependent variables by obtaining their values of skewness and kurtosis. In the field of social science, the constructs nature possesses various scales and measures that may have positive or negative skewed distribution (Pallant, 2011). Meanwhile, kurtosis refers to the measurement score of the distribution that shows the level to which observations are gathered around the central mean.

As for the values of skewness, acceptable values fall between +3 and -3 (Kline, 1998) and based on this criteria majority of the obtained skewness variables are acceptable. Similarly, kurtosis values ranging from +3 and -3 are also met as recommended by Coakes and Steed (2003). However, some values of skewness showed a deviation from normal distribution and the researcher addressed them for relationship testing through SPSS as suggested by Chin (1998).

Table 2. Results of skewness and kurtosis for normality test

| Variable | Skewness | | Kurtosis | |
|----------|-----------|------------|-----------|------------|
| | Statistic | Std. Error | Statistic | Std. Error |
| USV | -0.981 | 0.122 | 1.653 | .243 |
| CIUS | -0.911 | 0.122 | 1.993 | .243 |

4.3 Correlation Analysis

The correlation analysis results are displayed in Table 2, where it is evident that the entire correlations are less than 0.80. This result satisfies the suggestion proposed by Gujarati and Porter (2009). They stated that the correlation matrix should be less than 0.80 in order to make sure of the non-existence of multicollinearity.

Table 3. Results of Pearson Correlation Analysis

| | 1 | 2 |
|---------|----------|---|
| 1) USV | | |
| 2) CIUS | 0.543*** | |

Notes:

*** Correlation is significant at the 0.01 level (2- tailed).

** Correlation is significant at the 0.05 level (2- tailed).

* Correlation is significant at the 0.1 level (2- tailed).

4.4 Regression Results of Model (Based on Consumers' Intention to Use SST)

Table 4. Regression Results of Model (Dependent Consumers' Intention to Use SST)

| Variables | Standardized Coefficients | | t-value | Sig. |
|-------------------------|---------------------------|--|---------|---------|
| | Beta | | | |
| USV | 0.543 | | 12.914 | 0.000 |
| R ² | | | | 0.295 |
| Adjusted R ² | | | | 0.294 |
| F-value | | | | 166.781 |
| F-Significant | | | | 0.000 |
| Durbin-Watson | | | | 1.899 |

As for the regression analysis results obtained from user's seek values, they are contained in Table 4. It is evident from the table that the value of R² is 0.295, indicating that the model explains 29% of the variance in user's seek values - a respectable result. The value of the ... also shows that the independent variables are capable of explaining 29% of the dependent variable's variance. Aside from this, the F value was significant at (F=166.781, p<0.01), supporting the model validity. The researcher also made use of the Durbin-Watson (DW) test to determine autocorrelation. In this regard, the value of the test statistics varies from 0-4.0 as laid down by Reinard (2006) and Kazmier (1996). To this end, a statistical value that is less than 1.4 indicates the existence of a significant positive correlation series, and one that is greater than 2.6 indicates the existence of significant

negative correlation series (Kazmier, 1996). According to the rule of thumb of the DW test, values that fall in the range of 1.5 to 2.5 are deemed acceptable. Table 4 shows the DW value to be 1.899 – a value that falls within the above mentioned range, and as such, it confirms the independence of observations.

5. Discussion of Results

5.1 Users Seek Values and Consumers' Intention to Use SST

Based on empirical and theoretical evidence, this study proposed a positive relationship between users seek values and consumers' intention to use SST. In this regard, the study found a positive and significant association between users seek values and consumers' intention to use SST. Therefore, this finding supports the hypothesis.

This study is similar with previous studies that found a significant relationship between users seek values and consumers' intention to use SST such as, Meuter and Bitner (1998), Kauffman and Lally (1994), Dabholkar (1994, 1996) and Bitner, Brown, and Meuter (2000). Also, customers may be more inclined towards technology-based options based on the fact that they are easy to use, and are convenient in comparison to other alternatives, and they steer clear of contact with the employees of the service providers (Meuter et al., 2000).

6. Conclusion

The present study explored the crucial relationship between user's seek values and consumer intention to use SST in different Saudi service industries. It makes use of questionnaire to gather data from a sample comprising of 400 respondents. This study also employed SPSS tool to examine the relationship between user's seek values and consumer's intention towards using SST including descriptive statistics, normality of error terms, regression test, among others. The study result revealed that user's seek values positively and significantly affected consumer intention towards SST use. The study provided some limitations and recommendations for future works.

7. Limitations and Suggestions for Future Research

This study examined the relationship between user's seek values and consumer intention towards SST use in various Saudi service industries. Future works are recommended to examine this relation further in other sectors. The present study is also confined to Saudi Arabia and as such, future researchers can replicate this relationship in the context of other nations (e.g. Oman, Qatar, Bahrain etc.). This study examined the user's seek values-consumer intention towards SST use relationship and in regards to this, future works could explore this relation via a third variable (e.g. demographic characteristics, personality traits, etc.).

References

- Al-Ashban, A. A., & Burney, M. A. (2001). Customer adoption of tele-banking technology: the case of Saudi Arabia. *International Journal of Banking Marketing*, 19(5), 191-200. <http://dx.doi.org/10.1108/02652320110399683>
- Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of Retailing*, 83(3), 359-370. <http://dx.doi.org/10.1016/j.jretai.2007.03.001>
- Bitner, M. J., Ostrom, A. L., & Meuter, M. L. (2002). Implementing successful self-service technologies. *Academy of Management Executive*, 16(4), 96-108. <http://dx.doi.org/10.5465/AME.2002.8951333>
- Bitner, M., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(10), 138-149. <http://dx.doi.org/10.1177/0092070300281013>
- Black, N. J., Lockett, A., Ennew, C., Winklhofer, H., & McKechnie, S. (2002). Modelling consumer choice of distribution channels: an illustration from financial services. *International Journal of Bank Marketing*, 20(4), 161-173. <http://dx.doi.org/10.1108/02652320210432945>
- Carlin, M. (2002). *Technology Tamed: The New Future of Self-Service*. Randolph, New Jersey: Kiosk Business, The Magazine for Customer-Activated Solutions.
- Chin, W. W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), 7-16.
- Coakes, S. J., & Steed, L. G. (2003). *SPSS: analysis without anguish: version 11.0 for Windows*. Brisbane: Jacaranda Wiley.
- Curran, J. M., Meuter, M. L., & Surprenant, C. F. (2003). Intentions to use self-service technologies: a confluence of multiple attitudes. *Journal of Service Research*, 5(3), 209-224. <http://dx.doi.org/10.1177/1094670502238916>
- Dabholkar, P. A. (1994). Technology-based self-service delivery: a classification scheme for developing

- marketing strategies. *Advances in Services Marketing and Management*, 3, 241-271. [http://dx.doi.org/10.1016/S1067-5671\(94\)03021-9](http://dx.doi.org/10.1016/S1067-5671(94)03021-9)
- Dabholkar, P. A. (1996a). Consumer evaluations of new technology-based self-service options: an investigation of alternative models of service quality. *International Journal of Research in Marketing*, 13, 29-51. [http://dx.doi.org/10.1016/0167-8116\(95\)00027-5](http://dx.doi.org/10.1016/0167-8116(95)00027-5)
- Dabholkar, P. A. (1996b). Consumer evaluations of new technology-based self-service options. *International Journal of Research in Marketing*, 13(1), 29-51. [http://dx.doi.org/10.1016/0167-8116\(95\)00027-5](http://dx.doi.org/10.1016/0167-8116(95)00027-5)
- Dabholkar, P. A., & Bagozzi, R. P. (2002). An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors. *Journal of the Academy of Marketing Science*, 30(3), 184-201. <http://dx.doi.org/10.1177/0092070302303001>
- Davies, F., Moutinho, L., & Curry, B. (1996). ATM user attitudes: a neural network analysis. *Marketing Intelligence and Planning*, 14(2), 26-32. <http://dx.doi.org/10.1108/02634509610110778>
- Filotto, U., Tanzi, P. M., & Saita, F. (1997). Customer needs and front-office technology adoption. *International Journal of Bank Marketing*, 15(1), 13-21. <http://dx.doi.org/10.1108/02652329710155679>
- Flavian, C., Torres, E., & Guinaliu, M. (2004). Corporate image measurement: A further problem for the tangibilization of Internet banking services. *The International Journal of Bank Marketing*, 22(4/5), 366-381. <http://dx.doi.org/10.1108/02652320410549665>
- Gefen, D., & Straub, D. W. (1997). *Gender differences in the perception and use of email: An extension to the technology acceptance model*. MIS
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Inexperience and experience with online store: The importance of TAM and trust. *IEEE Transactions on Engineering Management*, 50(3), 307-321. <http://dx.doi.org/10.1109/TEM.2003.817277>
- Gerrard, P., & Cunningham, B. J. (2003). The diffusion of Internet banking among Singapore consumers. *International Journal of Bank Marketing*, 21(1), 16-28. <http://dx.doi.org/10.1108/02652320310457776>
- Gujarati, D., & Porter, D. (2009). *Basic Econometrics* (5th ed.). New York: McGraw-Hill.
- Harler, C. (2002). Come fly with me: kiosks are the new stars of the travel industry. *Kiosk Business*, 3(6), November/ December, 18-21.
- Henderson, T. P. (2001). *Multi-channel retailers increasingly rely on internet-based kiosks to bridge gap between channels*. Stores, October.
- Hsieh, A.-T., Yen, C.-H., & Chin, K.-C. (2004). Participative customers as partial employees and service provider workload. *International Journal of Service Industry Management*, 15(2), 187-199. <http://dx.doi.org/10.1108/09564230410532501>
- Huber, F., Herrmann, A., & Morgan, R. E. (2001). Gaining competitive advantage through customer value oriented management. *Journal of Consumer Marketing*, 18(1), 41-53. <http://dx.doi.org/10.1108/07363760110365796>
- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: a cross-sectional comparison of pre-adoption and post adoption beliefs. *MIS Quarterly*, 23(2), 183-213. <http://dx.doi.org/10.2307/249751>
- Karjaluo, H. (2002). Selection criteria for a mode of bill payment: empirical investigation among Finnish bank customers. *International Journal of Retail & Distribution Management*, 30(6), 331-339. <http://dx.doi.org/10.1108/09590550210429540>
- Kauffman, R. J., & Lally, L. (1994). A value platform analysis perspective on customer access information technology. *Decision Sciences*, 25(September-December), 767-794. <http://dx.doi.org/10.1111/j.1540-5915.1994.tb01869.x>
- Kazmier, L. (1996). *Schaum's Outline of Theory and Problems of Business Statistics*. McGraw-Hill, 1996-Business and Economics-410 pages.
- Kim, H.-W., Chan, H. C., & Gupta, S. (2007). Value-based adoption of mobile Internet: An empirical investigation. *Decision Support Systems*, 43, 111-126. <http://dx.doi.org/10.1016/j.dss.2005.05.009>
- Kline, R. B. (1998). *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press.

- Kolodinsky, J. M., & Hogarth, J. M. (2001). The adoption of electronic banking technologies by American consumers. *Consumers Interest Annual*, 47, 1-9.
- Kolodinsky, J. M., Hogarth, J. M., & Hilgert, M. A. (2004). The adoption of electronic banking by US customers. *International Journal of Bank Marketing*, 22(4/5), 238-276. <http://dx.doi.org/10.1108/02652320410542536>
- Korzaa, M. L. (2003). Going with the flow: predicting online purchase intentions. *Journal of Computer Information Systems*, 43(4), 25-31.
- Laukkanen, T. (2006). Customer perceived value of e-financial services: a means-end approach. *International Journal of Electronic Finance*, 1(1), 5-17. <http://dx.doi.org/10.1504/IJEF.2006.008835>
- Laukkanen, T. (2007). Internet vs mobile banking: comparing customer value perceptions. *Business Process Management Journal*, 13(6), 788-797. <http://dx.doi.org/10.1108/14637150710834550>
- Le Bon, J., & Merunka, D. (1998). *The role of attitude in competitive intelligence activities of salespersons: evidence and consequences of the mediating effect*. ISBM Working Papers, 22 December.
- Lee, H.-J., Cho, H. J., Xu, W., & Fairhurst, A. (2010). The influence of consumer traits and demographics on intention to use retail self-service checkouts. *Marketing Intelligence and Planning*, 28(1), 46-58. <http://dx.doi.org/10.1108/02634501011014606>
- Lockett, A., & Litter, D. (1997). The Adoption of Direct Banking Services. *Journal of Marketing Management*, 13(8), November, 791-881. <http://dx.doi.org/10.1080/0267257X.1997.9964512>
- Mattila, M., Karjaluoto, H., & Pento, T. (2003). Internet banking adoption among mature customers: early majority of laggards? *Journal of Services Marketing*, 17(5), 514-528. <http://dx.doi.org/10.1108/08876040310486294>
- Meuter, M. L., & Bitner, M. J. (1998). *Self-service technologies: extending service frameworks and identifying issues for research*, *Marketing Theory and Applications* (pp. 12-19). Chicago, Illinois: American Marketing Association.
- Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64(3), 50. <http://dx.doi.org/10.1108/08876040310486294>
- Mols, N. P. (1998). The behavioral consequences of PC banking. *International Journal of Bank Marketing*, 16(5), 195-201. <http://dx.doi.org/10.1108/02652329810228190>
- Monsuwe, T. P. Y., Dellart, B. G. C., & de Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, 15(1), 102-121. <http://dx.doi.org/10.1108/09564230410523358>
- Moutinho, L., & Smith, A. (2000). Modelling bank customer satisfaction through mediation of attitudes towards human and automated banking. *International Journal of Bank Marketing*, 18(3), 124-134. <http://dx.doi.org/10.1108/02652320010339699>
- Ndubisi, N. O. (2005). Integrating the moderation effect of entrepreneurial qualities into the technology acceptance model and treatment of potential confounding factors. *Journal of Information and Science Technology*, 2(1), 28-48.
- Pallant, J. F. (2011). *SPSS survival manual: a step by step guide to data analysis using SPSS* (4th ed.). Crows Nest, NSW: Allen & Unwin.
- Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value loyalty chain: A research agenda. *Journal of the Academy of Marketing Science*, 28(1), 168-174. <http://dx.doi.org/10.1177/0092070300281015>
- Plouffe, C. R., Vandenbosch, M., & Hulland, J. (2001). Intermediating technologies and multi-group adoption: a comparison of consumer and merchant adoption intentions toward a new electronic payment systems. *Journal of Product Innovation Management*, 18(2), 65-81. [http://dx.doi.org/10.1016/S0737-6782\(00\)00072-2](http://dx.doi.org/10.1016/S0737-6782(00)00072-2)
- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of internet banking services. *International Journal of Bank Marketing*, 19(4), 156-65. <http://dx.doi.org/10.1108/02652320110392527>
- Pousttchi, K., & Schurig, M. (2004). Assessment of today's mobile banking applications from the view of

- customer requirements. *Proceedings of the 37th Hawaii International Conference on System Sciences*. Big Island, Hawaii. <http://dx.doi.org/10.1109/hicss.2004.1265440>
- Ramayah, T., & Lo, M. Y. (2007). Impact of shared beliefs on “perceived usefulness” and “ease of use” in the implementation of an enterprise resource planning system. *Management Research News*, 30(6), 420-431. <http://dx.doi.org/10.1108/01409170710751917>
- Reda, S. (2000). *In-store interactive systems take on major role in drawing technology-savvy customers, stores, March, Visual Merchandising and Store Design*, 131, 5.
- Reinard, J. C. (2006). *Communication research statistics* (p. 600). Thousand Oaks, CA: Sage.
- Rosenberg, M., & Hovland, C. I. (1960). Cognitive, affective, and behavioral components of attitudes. In M. Rosenberg, C. I. Hovland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), *Attitude Organization and Change*. Yale Univ. Press, New Haven.
- Rugimbana, R. (1995). Predicting automated teller machine usage: the relative importance of perceptual and demographic factors. *International Journal of Bank Marketing*, 13(4), 26-32. <http://dx.doi.org/10.1108/02652329510082924>
- Rugimbana, R., & Iversen, P. (1994). Perceived attributes of ATMs and their marketing implications. *International Journal of Bank Marketing*, 12(2), 30-35. <http://dx.doi.org/10.1108/02652329410052955>
- Sheldon, K. M., Ryan, R., & Rawthome, M. (1997). *Trait Self and True Self: Cross-Role Variation in the Big-Five Personality Traits and Its Relations with Psychological*, 73, 1380-1393.
- Van Raaij, E. M., & Schepers, J. J. L. (2006). *The acceptance and use of a virtual learning environment in China*. Computers and Education.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186-204. <http://dx.doi.org/10.1287/mnsc.46.2.186.11926>
- Wang, Y.-S., Wang, Y.-M., Lin, H.-H., & Tang, T.-I. (2003). Determinants of user acceptance of internet banking: an empirical study. *International Journal of Service Industry Management*, 14(5), 501-519. <http://dx.doi.org/10.1108/09564230310500192>
- Weijters, B., Rangarajan, D., Falk, T., & Schillewaert, N. (2007). Determinants and outcomes of customer use of self-service technology in a retail setting. *Journal of Service Research*, 10(1), 3-21. <http://dx.doi.org/10.1177/1094670507302990>
- Wheeler, B. (2002). Binding in short-term visual memory, *Journal of experimental psychology general*, 131, 46-48. <http://dx.doi.org/10.1037/0096-3445.131.1.48>
- Wolfenbarger, M., & Gilly, M. C. (2001). Shopping Online for Freedom, Control, and Fun. *California Management Review*, 43(2), 34-55. <http://dx.doi.org/10.2307/41166074>
- Wright, T. (2002). Bank in a Box: Financial Kiosks Reach Out to Customers via the Web and Without Wires. *Kiosk Business*, 3(6), November/ December, 23-25.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing: integrating customer focus across the firm* (4th ed., p. 117). Singapore: McGraw-Hill.

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