

An Integrating Model of the Factor Influencing Online Shopping for the Consumer Goods

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Abstract

Electronic Commerce (EC) is changing the way organizations perform their tasks, interact with the customers and, in general, do their business. Among the many activities of EC, e-shopping has seen tremendous growth in the past several years. Within this context the aim of the current study is to propose an integrating model of the factors affecting online shopping for the consumer goods. The model is developed based on the Theory of Planned Behavior (Ajzen, 1991) and the proposed model of Limayem, Khalifa, and Frini (2000). The paper suggests two independent variables to the intention to purchase online, which are behavioural control and subjective norms. In addition the study proposes attitude as a mediator between perceived consequences and the intention to purchase online. Attitude also mediates the relationship between personal innovativeness and intention to purchase online.

Keywords: Electronic Commerce, e-shopping, Integrated model, online shopping.

1. Introduction

Retail e-commerce is becoming an increasingly important component of retail spending. According to comScore Networks, online spending represents approximately 7.0% of consumers' retail spending excluding food, gas and automobiles-up from 6.0% in 2005. The Census Bureau reports that in the third quarter of 2006, e-commerce accounted for 2.6% of all retail sales, compared to 2.1% in the same period last year. Deutsche Bank forecasts that the proportion of people with access to broadband will increase from 48% in 2006 to approximately 53% in 2007. And as consumers become more comfortable with purchasing online, we see retail e-commerce growing at or above 20% in 2007. This continued growth only underscores the need for retailers to optimize their multi-channel offerings to capitalize on this growth (Bain & Company, 2007).

The growing importance of e-commerce has triggered many academicians to conduct research in order to provide insights on this phenomenon. Many competing models emerge recently such as Perry, 2017 Rojas-Méndez, Parasuraman, Papadopoulos, 2017. Researchers have point out to the fact that explaining the adoption of information technology based on one theory may not be sufficient (Awa, Ojiabo, Emecheta, 2015; Gangwar, Date, & Ramaswamy, 2015; Ben Mansour, 2016; Awa, Ukoha, & Igwe, 2017). Instead, studies needs to incorporate more than one theory in investigating adoption of e-commerce. In line with these trends the objective of this study is to develop an integrated model of the factors effecting online shopping for the consumer goods.

2. Literature review

A growing number of studies have explored the determinants of consumers' electronic-shopping (e-shopping) behavior during recent years. Most studies either explicitly or implicitly embedded online purchasing behavior into various theoretical frameworks, including the theory of reasoned action (TRA), the theory of planned behavior (TPB), the technology acceptance model (TAM), transaction cost theory, innovation diffusion theory (IDT), and others. These studies used different sampling approaches such as internet-based survey, paper and pencil survey, telephone interview, or using an available database, and recruited their samples from different populations, including students, computer/internet/email users, online purchasers, and the general population.

Purchasing online is no longer a new retail model to most Internet user today. Among the common benefits consumers are able to enjoy through electronic commerce (Lee and Turban, 2001) are: ubiquity, more products and services, cheaper products and services, instant delivery, information availability, participation in auctions, electronics communities, "Get it your way", and no sales tax.

Marketing academicians have probed the topic of online shopping from different perspectives. Previous research reveals some useful insights on the demographic, socioeconomic, and psychographic profiles of Internet shoppers. Some studies on consumer online choice behaviour are descriptive in nature. Some have set forth explicit hypotheses regarding factors that influence online buying. Fewer attempts have been made to develop models of online buying. Few studies, if any, have made an elaborate attempt to relate the emerging e-shopping research to the extant research on traditional retailing.

As pointed out by Xinyu and Mokhtarian (2005), various dimensions of consumers' e-shopping behavior have been explored in previous studies. Generally, these dimensions can be classified into two categories: behavioral intention and actual behavior. Some studies treated e-shopping intention as the dependent variable (Choi and Geitsfeld, 2004); some studies choose actual e-shopping behavior as the dependent

variable (Eastin, 2002); and a few studies examined the determinants of multiple dependent variables including both behavioral intention and actual behavior (Grazioli and Jarvenpaa, 2000; Liang and Lai, 2002). In addition, several studies considered attitudes toward e-shopping as the ultimate dependent variable (Childers, Carr, Peck, & Carson, 2001).

Liang and Huang (1998) for example found that online shopping adoption depends on the type of the product, the perceived risk, and the consumer's experience. Similarly, Salkin (1999) argued that the two most important obstacles to online shopping are the lack of security as well as network reliability. This conclusion was confirmed by (Cockburn and Wilson, 1999), who found that consumers hesitate to use their credit number for online shopping because they are afraid that the number will be stolen. Another survey conducted by BizReport also found that many consumers consider that lack of security is one of the main factors inhibiting them from engaging in online purchasing (Leggatt, 2007).

Bellman, Lohse, and Johnson (1999) conducted a survey to determine the predictors of online buying. They found that the typical consumer leads a wired lifestyle and is time starved. Therefore, they recommended making Web sites more convenient to buy standard or repeat purchase items by providing customized information to make quick purchase decisions. The authors also stressed the need for an easy checkout process. Gehrke and Turban (1999) presented the results of a literature survey indicating that the main categories for successful Website design are: page loading speed, business content, navigation efficiency, security, and marketing/customer focus.

Several conclusions can be drawn from this review of the empirical studies on online consumer behavior as shown previously.

First, this important area of research is still in its infancy as most of these studies were conducted before 2004. As a result, the literature is rather fragmented and we still lack a good understanding of the factors affecting consumers' decision to buy from the Web because the consumers behavior in Malaysia have changed for the past 3 years especially the internet boom in the recent years and the internet technology has emerged to Web 2.0 interactive model now (Joe, 2007)

Lack of understanding what is really happening, how much potential there is, and what companies should be doing to take advantage of online shopping. As a result, commerce on the Net has turned out to be baffling, even to experienced managers and marketers (Aldridge, Forcht, & Pierson, 1997).

Second, most of studies conducted in Malaysia, Cheok (2002), Tan (2005), Cheah (2006) and Ghazali, Mutum, and Mahbob (2006) used TAM model to investigate the e-commerce related study which may or may not reflect all the e-shopping behavior in Malaysia. Legris, Ingham, and Colletette (2003) supported the usefulness of the TAM after reviewing a number of empirical studies, but they pointed out that results based on the TAM are not totally consistent or clear. They recommended the incorporation of factors related to human and social change processes, and the adoption of an innovation, into the model.

Third, according to Limayem, Khalifa, and Frini (2000), most of the empirical studies in this area, if not all of them, are cross-sectional. Therefore, they do not capture the essence of the dynamic online shopping phenomenon. The repeated surveys conducted by Georgia Institute of Technology's Graphics, Visualization, and Usability Center attest to the changing nature of WWW shopping over time. Moreover, many researchers emphasize the need for continue studies to better understand online shopping

Fourth, 22 studies choose students (either undergraduates or graduates) as their subjects (Belanger, Hiller, & Smith, 2002; Choi and Geistfeld, 2004). The student sample is often criticized due to its higher-than-average proportion of younger adults. However, most studies did not discuss the acceptability and

appropriateness of using students in this area of research. In addition to it, from the secondary data (IDC 2005 report), the highest spending on e-shopping category are working adults (30-49 years old) but not students. However, a student sample has some advantages for an e-shopping study, since those respondents will tend to be harbingers of future adoption patterns in the population at large. That is, the e-shopping behavior of today's over 50 years old adults is apt to tell us less about the future than that of today's 20 years old adults. Therefore, there is a need to have the balance samples study from the working adults and students to reflect the actual e-shopping behaviors.

Finally, existing studies ignored several other important factors that can affect consumers' decisions to purchase from the Web. For example, the role of consumers' innovativeness has not been investigated despite its importance. Personal innovativeness was found to transform consumer actions from static, reutilized purchasing to dynamic and continually changing behavior (Limayem et al, 2000). Hirschman (1980) confirmed the importance of this concept by stating that:

"Few concepts in the behavioral sciences have as much immediate relevance to consumer behavior as innovativeness. The propensities of consumers to adopt novel products, whether they are ideas, goods, or services, can play an important role of theories of brand loyalty, decision making, preference, and communication."

This study attempts to remedy to the few deficiencies detected in the literature review. It enhances our understanding of the factors affecting online shopping by using a more comprehensive behavioral (combine) model and taking into consideration the important concept of personal innovativeness and self-efficacy. Moreover, by conducting a study with the general sample of internet/computer/email users is more applicable for e-shopping behavior research. (Cao & Mokhtarian, 2005), parameter estimates developed from a student sample lack generalize-ability to a larger population because of its homogeneity.

3. Conceptual model and propositions

Theory plays a critical role in empirical research. According to the Merriam-Webster dictionary, theory refers to "a plausible or scientifically acceptable general principle or body of principles offered to explain phenomena". In deductive analysis, research hypotheses are constructed based on the available theory, and then are tested with empirical data.

As researched by Cao and Mokhtarian (2005), various theories have been explicitly or implicitly applied in research on consumers' e-shopping behavior, including the theory of reasoned action, the theory of planned behavior, the technology acceptance model, transaction cost theory, innovation diffusion theory, and so on.

The Theory of Planned Behavior (TPB) is an extension of the TRA (Ajzen, 1991). The major difference of the TPB from the TRA is its inclusion of perceived behavioral control. The TRA assumes that actual behavior is a motivational result of behavioral intention, and it does not consider the influence of behavioral constraints on the link between intention and behavior. In reality, most behavior is to some extent dependent on non-motivational factors such as availability of resources and opportunities. For example, an individual with a high intention to engage in e-shopping may not do so due to the lack of availability of the network or inferior internet skills. These factors can represent actual behavioral control; however, psychologists are more interested in the perception of behavioral control and its influence on behavioral intention and actual behavior. Perceived behavioral control refers to an individual's perception of how difficult it is for his/her to perform a behavior (Ajzen, 1991). The TPB postulates that an

individual's behavioral performance jointly relies on and can be predicted by his/her behavioral intention and perceived behavioral control.

Empirically, Jensen, Hansen & Solgaard, (2004) applied both TRA and TPB. They found that TPB with an additional path from subjective norm to attitude explains a higher proportion of variation in online grocery purchasing intention than does TRA. Choi and Geistfeld (2004) used perceived risk and perceived self-efficacy to measure the individual's attitude and perceived behavioral control, respectively. Limayem et al. (2000) augmented the TPB with two additional constructs: perceived consequences and perceived innovativeness. These two constructs were assumed to influence both attitude and behavioral intention. In their models, subjective norms were evaluated by an individual's perception of the opinions of his/her family, friends, and media; and behavioral control consisted of site accessibility, product description, transaction efficiency, navigation ability, speed, and efficiency. Soyeon, Eastlick, Lotz, and Warrington (2001) adapted the TPB by incorporating the influence of past behavior and ignoring the impacts of subjective norms. Further, they assumed that perceived behavioral control indirectly affects intention to shop online, through the intention to use the internet for information search.

Compared to traditional shopping, e-shopping is an innovative application of information technology by retail industries. Therefore, IDT can be applied to explore consumers' e-shopping behavior. Generally, the cumulative adoption of an innovation follows a sigmoid curve, with adoption growing slowly in its initial years, growing steeply as it reaches its half-way point, and growing slowly again as it nears its saturation level (maximum penetration). The rate of adoption is mainly dependent on five attributes of an innovation: relative advantage (the extent to which an innovation is perceived to be better than the one it substitutes for or competes with), compatibility (the extent to which an innovation is perceived to be consistent with the experiences and requirements of potential adopters), complexity (the extent to which an innovation is perceived to be difficult to use), trial-ability (the extent to which an innovation can be experimented with on a limited basis) and observe-ability (the extent to which the utility of an innovation is visible to the public). Relative advantage, compatibility, trial-ability, and observe-ability of an innovation are found to be positively related to its rate of adoption, while complexity is negatively associated with its rate of adoption (Rogers, 1983). Dearing, Meyer, and Kazmierczak (1994) further suggested that applicability and reliability are important for diffusion of risky innovations.

Innovation diffusion models are commonly used in aggregate studies although there are some efforts at the disaggregate level (Roberts and Lattin, 2000). In the context of e-shopping, most studies consider the influences of the constructs derived from IDT on disaggregate e-shopping behavior, rather than model the overall diffusion of e-shopping at an aggregate level. As mentioned earlier, Verhoef and Langerak (2001) explored the impacts of relative advantage, compatibility, and complexity of e-shopping; and Chen, Gillenson, and Sherrell (2002) and Chen and Tan (2004) introduced the compatibility of e-shopping into their TAM. Finally, Eastin (2002) examined the influences of compatibility, reliability, complexity, and relative advantage on the frequency of e-shopping.

Taylor and Todd (1995) indicated that a better understanding of the relationships between the belief structures and antecedents of intention requires the decomposition of attitudinal beliefs. Shimp and Kavas (1984) argued that the cognitive components of belief could not be organized into a single conceptual or cognitive unit. Taylor and Todd (1995) also specified that, based on the diffusion of innovation theory, the attitudinal belief has three salient characteristics of an innovation that influence adoption is relative advantage, complexity and compatibility (Rogers, 1983). Taylor and Todd (1995) showed that the

decomposed model of the TPB has better explanatory power than the pure TPB and TRA models. So, the argument of our empirical study is that e-shopping is a technological innovation and the decomposed TPB model gives a more satisfactory explanation of adoption intention. Decomposed TPB is supported by Shih and Fang (2004) research too.

Thus, this paper will base on the research model originated from the TPB not only because the TPB's constructs are easier to operationalize but also because this theory has received substantial empirical support in information systems and other domains a well (e.g. Parker, Manstead, Stradling, Reason, and Baxter (1992), East (1993), Randall (1994), Manstead and Parker (1995). In addition to it, the TPB with some additional constructs: self-efficacy, personal innovativeness and perceived consequences. Hence, the research model includes all the hypothesized links of the TPB as well as the new links that we would like to explore in this research. The new links represents the effects of personal innovativeness and perceived consequences as supported by Limayem et al. (2000).

As stated by Joey (2004), given two individuals with the same intention to engage in a behavior, the one with the stronger beliefs about his or her abilities, or perceived behavioral control, is more likely to actually perform. One of the key antecedents to perceived behavioral control in most formulations of TPB is self-efficacy, or the individual's self-confidence in his or her ability to perform the behavior. In terms of Internet purchasing, if an individual is self-confident about engaging in activities related to purchasing online, he or she should feel positive about his or her behavioral control over making Internet purchases. The more in control an individual feels about making Internet purchases, the more likely he or she will be to do so. Therefore, two propositions can be suggested.

Proposition 1. Positive beliefs about self-efficacy positively influence perceived behavioral control of web site accessibility (access, efficiency, and navigate).

Proposition 2. Positive beliefs about perceived behavioral control of Web site (access, efficiency, and navigate) is positively influence online purchasing intention.

On top of TPB, Limayam (2000) added one factor, called "perceived consequences." This construct is borrowed from Triandis (1980) model. According to Triandis, each act or behavior is perceived as having a potential outcome that can be either positive or negative. An individual's choice of behavior is based on the probability that an action will provoke a specific consequence.

It is important to include this construct because we are interested in identifying the specific consequences of online shopping that drive individuals to perform this behavior. The TPB claim that beliefs such as perceived consequences are completely mediated by attitude.

Proposition 3. Attitude mediates the relationship between perceived consequences (security, trust, and convenience) and the intention to purchase online.

Proposition 4. Attitude mediates the relationship between personal innovativeness and intention to purchase online.

An individual's normative structure, i.e. his or her beliefs about what important others think about the behavior in question, should directly influence his or her subjective norms, or perceptions of the social pressure to comply with expectations about engaging in the behavior. Subjective norms should in turn influence the individual's proclivity to engage in the behavior.

Proposition 5. Subjective norms are related to the intention to purchase online.

4. Conclusion

This study suggests an integrated model of the factor influencing online shopping for the consumer goods. The model is based on the Theory of Planned Behavior (Ajzen, 1991) and the proposed model of Limayem, Khalifa, and Frini (2000). Five propositions were suggested. Two propositions depict the relationships between behavioural control and subjective norms, as independent variables, and the intention to purchase online (as a dependent variable). In addition the model links the self-efficacy (antecedent) with behavioural control. In addition the study proposes attitude as a mediator between perceived consequences and the intention to purchase online. Attitude also mediates the relationship between personal innovativeness and intention to purchase online.

The study could contribute the current body of knowledge by integrating two models related to technology adoption. Reliance on one model, especially with the increasing number of competing models, may not be sufficient and comprehensive. In addition the present study answers the call for the re-examination of the direct between dependent and independent variables by adapting the attitude a mediating variable. Future studies may empirically test the current model in order to validate the suggested propositions.

References

- Ajzen, I. (1991). The theory of planned behavior: Some unresolved issues. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.
- Aldridge, K. F. & Pierson, J. (1997). Get linked or get lost: Marketing strategy for the internet. *Internet Research*, 7(3), 161-169.
- Awa, H.O., Ukoha, O, Igwe, S.R. (2017) "Revisiting technology-organization-environment (T-O-E) theory for enriched applicability", *The Bottom Line*, 30 (1).
- Awa, H.O., Ojiabo, O.U. Emecheta, B.C. (2015) "Integrating TAM, TPB and TOE frameworks and expanding their characteristic constructs for e-commerce adoption by SMEs", *Journal of Science & Technology Policy Management*, 6 (1), .76-94.
- Belanger, F., Hiller, J.S. & Smith, W.J. (2002). Trustworthiness in electronic commerce: The role of privacy, security, and site attributes. *Journal of Strategic Information Systems*, 11, 245-270.
- Bellman, S., Lohse, G.L. & Johnson, E.J. (2000). Predictors of online buying behavior, *Communications of the ACM*, 42 (12), 32-38.
- Ben Mansour, K. (2016) "An analysis of business' acceptance of internet banking: an integration of e-trust to the TAM", *Journal of Business & Industrial Marketing*, 31 (8), 982-994.
- Cao, X., & Mokhtarian, P.L. (2005). *The Intended and Actual Adoption of Online Purchasing: A brief review of recent literature*. Institute of Transportation Studies. <http://escholarship.org/uc/item/095934s0>

- Cheah S. Y. (2006). A Study of Factors Influencing Consumer Likelihood to Purchase Traditional Chinese Medicine Online. Unpublished MBA Thesis, Nottingham Trent University.
- Chen, L.D., Gillenson, M.L. & Sherrell, D.L. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information & Management*, 39, 705-719.
- Chen, L.D. & Tan, J. (2004). Technology adaptation in e-commerce: Key determinants of virtual stores acceptance. *European Management Journal*, 22 (1), 74-86.
- Cheok L.L. (2002). Study of the E-Commerce Readiness of Small and Medium Enterprises in Penang, Malaysia. Unpublished MBA thesis, Nottingham Trent University.
- Childers, T. L., Carr, C.L., Peck, J. & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behaviour. *Journal of Retailing*, 77, 511-535
- Choi, J. & Geistfeld, L.V. (2004). A cross-cultural investigation of consumer e-shopping adoption. *Journal of Economic Psychology*, 25 (6), 821-838.
- Cockburn, C. and Wilson, T. (1999). Business Use of the World Wide Web, U.K. Dept. Information Studies, University of Sheffield, Oct. 4 1999.
- Dearing, J. W., Meyer, G., & Kazmierczak, J. (1994). Portraying the new: Communication between university innovators and potential users. *Science Communication*, 16 (1), 11-42.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth: Harcourt Brace Jovanovich College Publishers.
- East, J.R. (1993). Investment decisions and the theory of planning behaviour. *Journal of Economic Psychology*, 14(2), 337-375.
- Eastin, M. S. (2002). Diffusion of e-commerce: An analysis of the adoption of four e-commerce activities. *Telematics and Informatics*, 19(3), 251-267.
- Gangwar, H., Date, H., & Ramaswamy, R. (2015) "Understanding determinants of cloud computing adoption using an integrated TAM-TOE model", *Journal of Enterprise Information Management*, 28 (1), pp.107-130.
- Gehrke, D. & Turban, E. (1999). Determinants of successful website design: Relative importance and recommendations for effectiveness. Proceeding of 32nd Hawaii International conference system sciences.
- George, J.F. (2004). The theory of planned behavior and Internet purchasing. *Internet Research*, 14(3), 198-212
- Ghazali, E., Mutum, D. & Mahbob, N.A. (2006). Exploratory study of buying fish online: are Malaysians ready to adopt online grocery shopping? *International Journal of Electronic Marketing and Retailing*, 1(1), 67-82
- Grazioli, S., & Sirkka L. J. (2000). Perils of internet fraud: An empirical investigation of deception and trust with experienced internet consumers. *IEEE Transactions on Systems, Man, and Cybernetics A*, 30 (4), 395-410.
- Hirschman, E.C. (1980). Innovativeness, novelty seeking, and consumer creativity. *Journal of Consumer Research*, 7(3), 283-295.
- IDC Report 2005, "Asia/Pacific Broadband Access Services Market Forecast and Analysis, 2004-2010"
- Jensen, J.M., Hansen, T. & Solgaard, H.S. (2004). Predicting online grocery buying intention: A comparison of the theory of reasoned action and the theory of planned behaviour. *International Journal of Information Management*, 24(6), 539-550.

- Leggatt, H. (2007). Online sales affected by low customer confidence in data security. *BizReport: E-commerce*. February 21, 2007
- Legrís, P., Ingham, J., & Colletrette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Technology*, 40(3), 191-204.
- Liang, T.P., & Lai, H.J. (2002). Effect of store design on consumer purchases: An empirical study of on-line bookstores. *Information & Management*, 39(6), 431-444.
- Limayem, M., Khalifa, M., & Frini, A. (2000). What Makes Consumers Buy from Internet? A Longitudinal Study of Online Shopping. *IEEE Transactions on Systems, Man, and Cybernetics—Part a: Systems and Humans*, 30(4), 421-432.
- Liang, T.P., & Huang, J. S. (1998). An empirical study on consumer acceptance of products in electronic markets: A transaction cost model. *Decision Support Systems*, 24(1), 29–43.
- Manstead S. R. & Parker, D. (1995). Evaluating and extending the theory of planned behaviour. *European Review of Social Psychology*, 6, pp. 69–96.
- Parker, D., Manstead, A. S. R., Stradling, S. G., Reason, J.T., & Baxter, J.S. (1992). Intention to commit driving violations: An application of the theory of planned behaviour. *Journal of Apply Psychology*. 77(1), 94–101.
- Perry, A. (2017) "Factors comprehensively influencing acceptance of 3D-printed apparel" *Journal of Fashion Marketing and Management*, 21 (2), 219-234.
- Randall, D.M. (1994). Why students take elective business ethics courses: Applying the theory of planned behaviour. *Journal of Business Ethics*. 13(5), 369–378
- Roberts, J. H., & Lattin, J.M. (2000). *Disaggregate-level diffusion models*”, In New-product Diffusion Models, edited by Vijay Mahajan, Eitan Muller, and Yoram Wind. Norwell, MA: Kluwer Academic Publishers.
- Rojas-Méndez, J.I, Parasuraman, A. Papadopoulos, N. (2017) "Demographics, attitudes, and technology readiness: A cross-cultural analysis and model validation", *Marketing Intelligence & Planning*, 35 (1), 18-39.
- Rogers, E.M. (1995). *Diffusion of Innovations*. New York: The Free Press, 4th edition.
- Rogers, E.M. (1983). *Diffusion of Innovations*. Free Press, New York, NY.
- Salkin, S. (1999). Fear of buying. *Logistics Management and Distribution Report*, 8, (5), 101–104.
- Shih, Y.Y., & Fang, K. (2004). The use of a decomposed theory of planned behavior to study Internet banking in Taiwan. *Internet Research*, 14(3), 213–223.
- Shimp, T. & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research*, 11(3), 795-809.
- Tan L.T. (2005). Factors Influencing Consumer Intention To Purchase PC Online. Unpublished MBA Thesis, Nottingham Trent University, Dec 2005.
- Taylor, S. & Todd, P.A. (1995). Understanding information technology usage: A test of competing models. *Information System Research*, 6(2), 144–176.
- Triandis, C.H. (1980). *Beliefs, Attitudes and Values*. NE: Univ. Nebraska Press, 1980, pp. 159–295.
- Verhoef, P.C. & Langerak, F. (2001). Possible determinants of consumers’ adoption of electronic grocery shopping in the Netherlands. *Journal of Retailing and Consumer Services*, 8(5), 275-285.