FETDE 2020

International Conference on Finance, Entrepreneurship and Technologies in Digital Economy

VALIDATION OF THE ELECTRONIC SATISFACTION MODEL FOR NON-CASH TRANSACTIONS IN DIGITAL TOURISM

Alexey Platov (a)*, Shakhlo Zikirova (b), Elena Podsevalova (c)
*Corresponding author

(a) Moscow State Institute of Physical Culture, Sportsand Tourism named after Y.A. Senkevich, Moscow, Russia, aplatov@yandex.ru
(b) Moscow State Institute of Physical Culture, Sportsand Tourism named after Y.A. Senkevich, Moscow, Russia, zshakhlo@mail.ru
(c) Russian State University of Tourism and Service, Moscow, Russia, 4955818347@mail.ru

Abstract

The impact of dependent variables of non-cash transactions in digital tourism on consumer behavior is of interest to scientists and practitioners in many countries. The purpose of the study was to test the factors of electronic satisfaction when making non-cash transactions based on the model proposed in 2000. The study attempts to validate the electronic satisfaction model for non-cash transactions in the field of digital tourism. Factors that positively affect the implementation of non-cash payments were divided into four categories, defined in previous studies. This research is of an analytical and descriptive type. Primary data obtained from an online survey were used for processing. Correlation and regression analysis was used to test hypotheses. It is shown that convenience, merchandising, site design and financial security play a key role in consumer satisfaction when making non-cash transactions when purchasing goods in e-tourism. The validity of the electronic satisfaction model has been confirmed for Russian digital tourism.

Keywords: E-satisfaction, non-cash transactions, digital tourism

1. Introduction

The release of free time obtained through the digitalization of processes and production leads to an increase in the share of services in the economy, the growth of service enterprises and an increase in demand for services (Razumovsky et al., 2020). The global tourism market has been steadily growing from 3% to 7% annually over the past decade. At the turn of the century, travelers expected comfort from service providers expressed in material convenience. Now they expect technological amenities such as ultra-fast Wi-Fi, the latest hotel technology, tailored travel booking for the end user and, at the same time, personalized service that takes into account the needs and preferences of each traveler. The modern traveller tries to make the most of every purchase decision by having at his disposal a variety of comparison tools, from price comparison, to social networks and consumer-oriented reviews. To date, we can talk about the emergence of a global tourism product, which represents the aggregate offer of many participants in the international tourism market, ready for sale at any time to any buyer. Modern mobility transforms the economy of the tourist market by creating digital business models of interaction with consumers (Bozhuk et al., 2020).

The following stages of forming a new model of relations with consumers in the tourist services market are being consistently built:

the relationship of a tourist enterprise with end users through the use of information platforms and social networks becomes permanent;

the tourist product adapts to the known needs of the client and becomes individual;

with increasing online availability of tourist content, individual consumer requests become part of the tourist product;

a "seamless" travel model is becoming standard, where consumers manage, monitor and evaluate the entire range of travel products and require service providers to interact seamlessly and review their account status in real time.

The market volume of eTravel in Russia has grown from 120 billion rubles in 2011 to 1030 billion rubles in 2019. The annual growth rate is 20-25 %. Offline sales channels are already less popular than online ones in the travel segment. 52% of Russian travelers purchase travel services online, while 48% apply to traditional agencies. When booking online, the majority of travelers use a computer (74%), while 26% use mobile devices for this purpose.

The introduction of Internet communications technologies and cashless payment systems has contributed to solving the problems of geographical remoteness and limited information. The development of e-commerce shows that cashless transactions can stimulate the country's economy. Non-cash transaction technologies related to the purchase of tourist goods and services are of great importance for the development of e-tourism. Today it is difficult to imagine tourist Internet portals and ticket sales sites without using such technologies. The most common tools for non-cash transactions in e-tourism are debit and credit cards, e-wallet, and Internet banking. There are a number of factors that influence the decision to use a non-cash transaction when purchasing a tourist product (Ohlan et al., 2019). The most common factors include transaction security, unstable Internet connections, limited knowledge of non-cash transactions and the Internet, lack of education, high transaction costs, and complex reimbursement

procedures (Podile, 2017). These factors are responsible for shaping the perception of non-cash payments among consumers and keep them from purchasing goods and services using such technologies. Currently, numerous studies are being conducted that identify and analyze the factors responsible for electronic consumer satisfaction and contribute to making purchases (Utami et al., 2019). However, research on non-cash transactions in the tourism sector is still very limited (Wulandari, 2017), so our study is an attempt to test the model of consumer electronic satisfaction with non-cash transactions in e-tourism.

2. Methods

There are various factors that determine the choice of non-cash payment methods by consumers. These factors can have both direct and indirect influence on decision making. The e-satisfaction model classifies these factors into four categories: convenience, merchandising, site design, and financial security (Szymanski & Hise, 2000). This model was re-tested in 2004, and the reliability of this model was confirmed in the field of electronic retail (Evanschitzky et al., 2004). Our research is based on a proven model and tests its validity in the context of e-tourism. The above model factors are adapted to the context of e-tourism.

Convenience is the ability to use something more easily or meet any needs, needs. Online shopping saves time and effort, and makes it easier to find suitable products and sellers (Palacios & Jun, 2020). Convenience in the context of electronic satisfaction contains three variables: total purchase time, convenience, and ease of viewing. Satisfaction with e-retail is measured by two levels: the first is the level of customer satisfaction, and the second is the level of their enjoyment (Zeithaml et al., 1996). It can be summarized that both are determined by the convenience provided to consumers by non-cash transaction tools. *H1.*Thus, the level of electronic satisfaction directly depends on the level of positive perception of convenience in non-cash payments.

Merchandising is an activity in marketing communications, the purpose of which is to stimulate retail sales by attracting the attention of potential customers to the necessary brands or products. Merchandising is divided into two main areas: product offer and product information. A product offer is an individual way to offer a specific branded product and service to a consumer. Product information provides consumers with information about the product, services, and non-cash transactions. Traditional stores operate a variety of products and information in a limited space, which limits the achievement of high profits (Dujak, 2016), while the capacity of websites is not limited, so online stores are able to work with a wide range of products, providing full information about them. *H2.*Thus, we postulate that electronic satisfaction will increase with the increase in the level of positive perception of non-cash transactions merchandising.

Site design is the design of content, the totality of all graphic elements on a web page. Previously, web design was understood only as visual design, but now user convenience has come to the fore, so analytics and competent structuring of information on the site have been added to the tasks of web design (Perera & Sachitra, 2019). Website design influences customer satisfaction and online purchasing decision-making (Karim, 2013). In our opinion, the site design should provide a simple and clear interface for transactions, all stages of the transaction procedure, as well as the availability of necessary information

about the success or failure of the transaction. *H3.*In formulating the third hypothesis, we state that the degree of electronic satisfaction increases if the perception of the site design becomes more positive.

Financial security is the protection of consumers ' financial interests at all levels of financial relations. Numerous non-cash transaction tools undoubtedly contribute to the growth of sales, but they also attract fraudsters and hackers. Despite the protection of non-cash transactions via Internet channels, hackers and fraudsters can steal identity, pin codes, passwords, and phone numbers (Kakade & Kharade, 2017). Security issues have created a negative perception among many consumers that transactions based on online and mobile technologies are not secure. The perceived level of security directly affects trust (Barkhordari et al., 2017). Trust ensures the popularity of websites and consumer loyalty, so it is a factor contributing to the wider adoption of non-cash payments. It can be assumed that financial security is largely responsible for the satisfaction of consumers who use online transactions. *H4.*The fourth hypothesis states that electronic satisfaction is directly related to the level of perception of financial security in non-cash financial transactions.

The research is analytical and descriptive. The city of Saint Petersburg was chosen for the research because it is a recognized center of international and Russian tourism. 800 questionnaires were sent out online to tourists visiting Saint Petersburg. The survey was conducted in two stages from August 2019 to February 2020. In this study, 387 fully completed forms were received.

Data reliability was evaluated using Cronbach's alpha, and the internal consistent reliable variance for all elements was 0.77 (77%). The various variables are grouped into categories, and their alpha coefficient was compared with the alpha analysis coefficient of earlier studies. To confirm the hypothesis of the study, a regression analysis and a correlation test were performed.

The research is analytical and descriptive. The city of Saint Petersburg was chosen for the research because it is a recognized center of international and Russian tourism. 800 questionnaires were offered to online tourists who visited Saint Petersburg. The survey was conducted in two stages from August 2019 to February 2020. In this study, 387 fully completed forms were received.

Data reliability was evaluated using Cronbach's alpha, and the internal consistent reliable variance for all elements was 0.77 (77%). The various variables are grouped into categories, and their alpha coefficient was compared with the alpha analysis coefficient of earlier studies. To confirm the hypothesis of the study, a regression analysis and a correlation test were performed.

The study sample consisted of 52 percent of men and 48 percent of women with an average age of 34 years. Among both sexes, 19 percent were students, 62 percent were employees, 15 percent were self-employed, and 4 percent positioned themselves as unemployed.

3. Results and Discussion

Before statistical tests were performed, 3 outliers were found that were excluded from the study. Tests were also performed for multicollinearity and deviations from linearity, homoscedasticity, and the observed standardized residues were distributed normally. The Correlation between predictors was established as statistically significant. Regression scattering graphs demonstrate that linearity and homoscedasticity assumptions are normal and reasonable.

The data in table 1 shows that the regression coefficient for convenience, site design, and financial security is statistically significant, so hypotheses 1, 3, and 4 are confirmed. The coefficient for product offers was also statistically significant, but the "product Information" variable in the same category did not show a significant regression coefficient, so we cannot accept the second hypothesis. In addition, the results showed that convenience has the greatest impact on the level of electronic satisfaction, followed by the site design. The offer of products has less impact on the level of electronic satisfaction. As shown in table 2, all correlations were statistically significant at $\leq .05$. Shopping convenience and site design are most closely correlated with eSatisfaction, followed by financial security. The correlation with product information was weaker.

Table 1. Regression analysis

Predictor variable	Standard coefficient (SE)			
	Current study	Szymanski and Hise	Evanschitzky et al. E-shopping model	Evanschitzky et al. E-finance model
Convenience	0.25 (0.03)	0.24 (0.02)	0.26 (0.06)	0.27 (0.06)
Product offer	0.09 (0.03)	0.01 (0.02)	0.12 (0.04)	-0.03 (0.05
Product information	-0.07 (0.02)	0.11 (0.03)	-0.5 (0.05)	0.14 (0.06)
Site design	0.24 (0.01)	0.21 (0.03)	0.14 (0.07)	0.26 (0.06)
Financial security	0.19 (0.05)	0.21 (0.05)	0.12 (0.04)	-0.03 (0.04)
F model (p-level)	63.84 (>0.5)	76.36 (>0.5)	12.94	20.20
R^2 (R^2 adjusted)	0.31 (0.24)	0. 28 (0.27)	0.18 (0.17)	0.25)

Table 2. Correlation matrix

	e-Satisfaction	Convenience	Product offer	Product information	Site design	Financial security
e-Satisfaction	1	0.39	0.29	0.16	0.40	0.32
Convenience	0.39	1	0.34	0.18	0.20	0.20
Product offer	0.29	0.34	1	0.50	0.36	0.12
Product information	0.16	0.18	0.49	1	0.33	0.13
Site design	0.40	0.20	0.36	0.33	1	0.30
Financial security	0.32	0.20	0.12	0.13	0.30	1

4. Conclusions

As part of this research, we concluded that eSatisfaction in relation to non-cash transactions increases as the perception of product convenience, site design, and financial security becomes more positive. However, the correlation between eSatisfaction and merchandising of non-cash transactions was not confirmed. Regression analysis confirmed the validity of the e-satisfaction model by Szymanski and Hise in satisfaction measurements in other e-retail segments. This was confirmed by Evanschitzky et al.

(2004) who also convincingly demonstrated the suitability of this model. However, in order to determine the boundary conditions of this model, it is necessary to explore more product and regional markets. This study focused on online travel purchases, which contributes to a deeper understanding of non-cash transactions and may motivate other researchers to explore new models of non-cash transactions. One of the goals of this study was to provide additional evidence of the validity of the model considered, but for a broader study of eSatisfaction in the context of the concept of e-marketing, it is advisable to develop a model that includes from 6 to 8 categories. We believe that in the future, the eSatisfaction model should be expanded to include variables such as technology, situations, social, economic and cultural factors, which will provide more accurate results in future studies. In addition, it would be useful to conduct a comparative analysis of expectations and inconsistencies regarding non-cash transactions for online tourism businesses and traditional businesses.

References

Barkhordari, M., Nourollaha, Z., Mashayekhib, H., Mashayekhic, Y., & Ahangar, M. (2017). Factors influencing adoption of e-payment systems: an empiricalstudy on Iranian customers. *Information systems and e-business management, 15*(1), 89-116.

Bozhuk, S., Pletneva, N., & Maslova, T. (2020). Evdokimov Problems of transformation in the tourismindustry in the digital economy. *IES2019 SHS Web of Conferences 73*, 0100. https://doi.org/10.1051/shsconf/20207301003

Dujak, D. (2016). Space management in category management – A comparative analysis of retailersin the sub category of pickled and preserved vegetables. *21st international scientific conference SM 2016*, 409-423.

Evanschitzky, H., Iyer, G. R., Hesse, J., & Ahlert, D. (2004). E-satisfaction: a re-examination. *Journal of Retailing, 80*, 239-247. https://doi.org/10.1016/j.jretai.2004.08.002

Kakade, S., & Kharade, J. (2017). Security in electronic transaction. *International Research Journal of Engineering and Technology (IRJET), 4*(4), 2906-2909.

Karim, R. (2013). Customer Satisfaction in Online Shopping: a study into the reasons for motivations and inhibitions. *IOSR Journal of Business and Management, 11*(6), 13-20. https://doi.org/10.9790/487X-1161320

Ohlan, M., Rani, E., & Autade, C. D. (2019). Impact of Cashless Transactions on Purchasing Behavior of Respondents. *International Journal of Current Microbiology and Applied Sciences, 8*(711), 823-829. https://doi.org/10.20546/ijcmas.2019.811.097

Palacios, S., & Jun, M. (2020). An exploration of online shopping convenience dimensions and their associations with customer satisfaction. *International Journal of Electronic Marketing and Retailing, 11*(1), 24-49. https://doi.org/10.1504/IJEMR.2020.10028102

Perera, G. A. B. S., & Sachitra, K. M. V. (2019). Customer Satisfaction towards Online Shopping. *Asian Journal of Advanced Research and Reports, 6*(2), 1-10. https://doi.org/10.9734/ajarr/2019/v6i230149

Podile, V. (2017). Public Perception on Cashless Transactions in India. *Asian Journalof Research in Banking and Finance, 7*(7), 63-77. https://doi.org/10.5958/2249-7323.2017.00069.4

Razumovsky, V., Sultanova, A., Chechina, O., & Nikonorova, S. (2020). Digital Economy: Information Technology and Trends in Tourism. *BTSES-2020 E3S Web of Conferences 159*, 04029. https://doi.org/10.1051/e3sconf/202015904029

Szymanski, D. M., & Hise, R. T. (2000). E-Satisfaction: An Initial Examination. *Journal of Retailing, 76*(3), 309-322. https://doi.org/10.1016/S0022-4359(00)00035-X

Utami, W., Jadmiko, P., & Azliyanti, E. (2019). Analysis the Effect of Web Portal on Electronic Satisfaction. *Andalas Management Review (AMAR), 3*(2), 14-27. https://doi.org/10.25077/amar.3.2.14-27.2019

Wulandari, N. (2017). Cashless payment in tourism. An application of technology acceptance model. *Journal of Environmental Management and Tourism, 8*(8), 1550-1553. https://doi.org/10.14505/jemt.v8.8(24).10

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing, 60*(2), 31-46. https://doi.org/10.1177/002224299606000203