

HOW DO WE BEHAVE IN A DIGITAL ENVIRONMENT? – THE IMPACT OF DIGITAL MARKETING ON CONSUMER BEHAVIOR

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ABSTRACT

The purpose of this paper is to determine the impact of digital marketing on consumer behavior in a digital environment, their online purchase decision, satisfaction with online shopping and risk perception. The goal was to investigate the relationship between the impact of different factors of digital marketing on consumer decision to purchase products online, their satisfaction and risk perception. An analysis of the recent literature on the topic of digital marketing, consumer behavior, online purchase decision, satisfaction and risk perception was performed. Empirical research was conducted on a convenience sample of 200 respondents. Descriptive and multivariate statistics were used in the data analysis. Data analysis was performed using the software package IBM SPSS Statistic Version 23. The results of the research show that online reviews have an important impact on customer online purchase decision. The results also show that there is a positive and significant impact between online purchase decision and customer satisfaction and a weak relationship between risk perception and customer satisfaction. The research represents a starting point for further research on online consumer behavior, factors affecting their online purchase decision and risk perception reduction. Furthermore, the results can help online sellers develop strategies and tactics that can have a positive impact on online customer purchase decision and risk perception reduction.

KEYWORDS: digital marketing, consumer behavior, online purchase decision, consumer satisfaction, risk perception

1. INTRODUCTION

Digital marketing has created many new opportunities on the Internet, and its role has been rapidly growing in recent years [Anumolu et al., 2015]. It can be defined as the use of information and communication technology to support marketing activities for better customer satisfaction [Veleva and Tsvetlanova, 2020]. The Internet provides consumers with much quicker access to information and sellers than other sales channels. Consumers have access to supplier and manufacturer websites, comparison sites, discussion forums and ads. The Internet has also diminished the gap between different societies. More and more customers are buying global products and services at local prices, causing companies' cost structures to become globally competitive. Digital marketing has also led to behavioral changes in the digital environment compared to the traditional marketing environment. Not only has behavior changed, but consumers have also acquired entirely new characteristics.

The aim of this study is to determine the influence of digital marketing on consumer behavior, the factors affecting online purchase decision, how online purchase decision affect customer satisfaction and how risk perception affects customer satisfaction.

The following auxiliary hypotheses were formulated:

H1: There is a positive relationship between online reviews and online purchase decision.

H2: There is a positive relationship between online purchase decision and customer satisfaction.

H3: There is a weak relationship between risk perception and customer satisfaction.

The empirical research was conducted online using the Google Forms platform on a sample of 200 respondents on a convenient sample through e-mails and social networks. Descriptive and multivariate statistics were used in the data analysis. The data analysis was performed using IBM SPSS Statistic Version 23 software.

The paper consist of five chapters. The introductory part, is followed by description of the main constructs used in the paper, description of the methodology, and results of the empirical research. Discussion and conclusions of the research are given at the end of the paper.

2. THEORETICAL FRAMEWORK

2.1. DIGITAL MARKETING

Digital marketing represents achieving marketing goals using digital technologies. Characteristics of a consumer in the digital environment include: being well-informed due to technological progress, being self-directed and difficult to influence, fast paced lifestyle, being selective and comparing different options before making purchase decisions, being volatile, and displaying contradictory behaviors, as well as staying constantly connected using technology like smartphones and wearable devices to cover up differences between online and offline world [Legler, 2015]. Despite these characteristics, online consumers exhibit heterogeneous behaviors. Nonetheless, online consumer behavior follows the same decision-making phases, which include problem recognition, information search, and evaluation of alternatives, purchase decision and post-purchase behavior [Kotler and Armstrong, 2018]. Understandably, consumers allocate more attention to purchasing an automobile than to routine purchases like

laundry detergent or juice. Consequently, buying a car assumes a high degree of involvement, while purchasing laundry detergent implies low involvement [Schwarzl and Grabowska, 2015].

In the information search, evaluation, and decision-making phases, consumers in the digital environment manifest the following characteristic behaviors: consumers seek and receive personalized products; they are influenced by online reviews and sources from social media as well as offline sources and they are impacted by recommendations from other consumers [Muller et al., 2011]. Customer review is defined as any positive or negative statement made by customers on online platforms [Park and Kim, 2008]. It gives a customer more reasons to make decisions and increases decision-makers confidence in the decisions taken [Dwidienawati et al., 2020]. Customer review can reduce the risk perceived by customers and improve the degree of satisfaction and their efficiency in making decisions [Yan et al., 2016]. Beneke et al., [2016] considers customer review as an Internet tool used by the global community to exchange information about products and services. Social media influencers represents a person who represents companies through branded content on social media account such as Facebook, Instagram, Snapchat, Twitter and YouTube [Pereira et al., 2023]. They are users with a high number of followers on their digital channels and they are able to monetize their audience by introducing sponsored content in their photos, videos and texts [Abidin, 2016]. In the post-purchase phase, the consumers in the digital environment manifest behaviors of social media providing direct communication between the customer and the brand, thus influencing consumer behavior and effectively turning consumers into virtual journalists or public relations experts [Ugonna et al., 2017].

2.2. ONLINE PURCHASE DECISION

An online purchase decision is an action performed by someone to select the best option from range of options [Hidayat et al., 2021]. Before making a purchase, consumers must make many decisions that are based on the willingness to satisfy their needs [Hartanto et al., 2022]. The online shopping decision process is similar to the in-store shopping decision process, but there are some differences. On the Internet, customers have access to more information and can compare more alternatives than in a store. Customers can also purchase products or services 24/7. E-retailers continuously invest in online purchase decision ads to help customers with online shopping [Tang, 2020]. Social networks usage influences the purchase decision process of the customer [Prasad et al., 2018]. The opinions of friends, colleagues and relatives posted on social networks can have a significant impact on consumer purchasing decisions [Schwarzl and Grabowska, 2015; Liang et al., 2020]. Furthermore, product recommendations of friends and colleagues on online social networks have a significant impact on the customers' online purchase decision [Li et al., 2021]. A high degree of trust stimulates and meets high expectations of customers; satisfies transactions, eliminates risk perception, uncertainty and interdependence [Pavlou, 2003]. Satisfied customers become brand advocates, while dissatisfaction can lead to negative attitudes, creating cognitive dissonance. Online communication significantly influences online purchase decisions [Prasad et al., 2018], especially the use of social media and electronic word-of-mouth [Chevalier and Mayzlin, 2006; Prasad et al., 2017].

2.3. RISK PERCEPTION

Risk is one of most significant problem of online shopping [Farivar et al., 2017]. Consumers perceive higher levels of risk when shopping online then in traditional distribution channels due to limited physical access to products and sales personnel [Dai et al., 2014]. They feel unsure

and vulnerable [Chung et al., 2015] and apply tactics that mitigate their risks [Verma and Pant, 2021]. Online risk perception can be defined as the feeling of insecurity and vulnerability experienced while browsing a website [Alcántara-Pilar et al., 2015]. Risk perception or perceived risk is defined as any uncertainty perception by the customer about an unforeseen consequence due to purchase [Cox, 1967], consumers' feelings of likelihood and unpleasant consequence [Cunningham, 1967] or an attribute of an alternative decision reflecting the variance of its possible outcomes [Gefen et al., 2002, Verma and Pant, 2021:294]. Kim et al., [2008] defined risk perception as a customer's belief about the potential uncertain negative outcomes from the transaction. Farivar et al. [2018] defined risk perception as the customers' uncertainty feelings regarding a possible negative outcome of using a product or a service due to an inability to evaluate the product prior purchase or return of products [Aghkhan-Simonian et al., 2012; Verma and Pant, 2021]. Risk perception is a multidimensional construct consisting of financial risk, product risk and information risk [Bhatnager et al., 2000]. Shopping includes risk because a retailer's decision may have results which the customer cannot predict perfectly, and the outcome of some decisions could be unpleasant for the customer [Bauer 1960; Chiu et al., 2012].

2.4. CONSUMER SATISFACTION

Consumer satisfaction is defined as evaluation and judgment of a product or service that successfully provides a pleasurable level of consumption-related fulfillment [Oliver, 1993, 2010]. Consumer satisfaction in an online context can be defined as the user's contentment with their purchasing experience on the Internet [Andersen and Srinivasan, 2003]. Satisfactory online experience plays a crucial role in users' overall evaluation of website quality and their online purchase intention [Tang and Jang, 2008]. Online customer satisfaction comes from customer service quality experience and through online service process [Zhou et al., 2019]. Consumer heterogeneity with different risk perception in online service process [Song and Hu, 2019] can affect customer purchase behavior [Song et al., 2021] and their satisfaction. Online customers are satisfied if the perceived performance matches their expectations [Al-Adwen and Al-Horani, 2019]. The results of Javed et al. [2020] research have proven that post-sale services from online retailers are important determinants in the cumulative online customer satisfaction. Verma and Pant [2021] have developed a new input output framework by including price verification, product display, social influence and risk perception of online grocery shoppers and have proved that product display is negatively influenced by risk perception. Curras-Perez and Sanchez-Garcia [2012] researched online sales of air tickets and concluded that satisfaction has a stronger effect on purchase intent in the case of consumers' higher risk perception. The influence of satisfaction on commitment is weaker in consumers with a higher level of perceived risk [Curras-Perez and Sanchez-Garcia, 2012].

2.5. RESEARCH HYPOTHESES

The fundamental online tools of digital marketing include: websites, email marketing, content marketing, social media platforms (Facebook, Twitter, LinkedIn, Instagram, and others), blogs, SEO optimization, Big data marketing, Online advertising, visual marketing (YouTube), mobile marketing, wearable devices, Internet of Things and Games [Veleva and Tsvetlanova, 2020]. In the past decade, Internet strategies have been evaluating rapidly. In response to the challenges of the modern era, users have adapted their behavior to the Internet. These changes have led to the development of new user habits and behaviors in the digital environment, increasingly characterized by personalized strategies for attracting new customers. In the digital environment where companies need to understand their users and consumers, the new models

or customer behavior on the Internet should encompass constructs such as customer experience, influencer marketing and user-generated content (UGC) [Saura et al., 2020]. In the digital environment, online reviews [Chou et al., 2013; Dwidienawati et al., 2020; Hartanto et al., 2022], the Influencers [Pereira et al., 2023] and sources from social media as well as offline sources influence the consumers' purchase decision. The digital environment enables consumers to leverage recommendations and information gathered from different types of consumers [Muller et al., 2011]. Based on the above, a study hypothesis can be proposed: *H1: There is a positive relationship between online reviews and online purchase decision.*

Customer satisfaction is a consequence of the customer experience during the purchase process and its role is very important in future customer behavior, such as online repurchase intention and loyalty [Pereira et al., 2016]. Hossain et al. [2018] have proven that QR codes have significant impact on purchase decision and customer satisfaction. Online purchase decision positively affects customer satisfaction [Hartanto et al., 2023]. A satisfied online customer would likely shop again and recommend online shopping to others, while a dissatisfied customer would leave his online retailers with or without any complaints [Pereira et al., 2017]. Taking into account the above mentioned, the following hypothesis can be proposed: *H2: There is a positive relationship between online purchase decision and customer satisfaction.*

In Chen et al. [2015] research risk perception has a significant negative impact on customer satisfaction. In the online shopping environment customers often, make a purchase before experiencing a product so risk perception is an important antecedent of customer satisfaction [Moon and Armstrong, 2020]. Risk perception in e-commerce has a significant negative impact on attitudes towards online shopping [Shih, 2004], intention to shop on the Internet [Pavlou, 2003], and Internet purchasing behavior [Bodmer, 2009, Moon and Armstrong, 2020]. Moon and Armstrong [2020] research investigated how online-to-offline service quality affects risk perception and trust, and how this customer perception influences customer satisfaction. High level of service quality should improve the perceived trust and reduce risk perception of the products and services, low risk perception, and high-perceived trust have a positive effect on customer satisfaction. The results of Alcántara-Pilar et al. [2017] research revealed that tourist online satisfaction, perceived website usability and online risk perception are significant antecedents that influence the affect towards a travel destination generated online. The higher online risk perception, the lower the effect on a travel destination. Therefore, the following hypothesis can be proposed: *H3: There is a weak relationship between risk perception and customer satisfaction.*

3. RESEARCH METHODOLOGY

3.1. MEASUREMENT SCALES

To achieve the purpose and goals of the paper, an empirical study was conducted on a convenience sample of respondents (N=200). Scales from previous studies were used. They were translated into Croatian and adapted to field of digital marketing and online purchase decision. The attitudes of the respondents were measured using a Likert scale for evaluating attitudes, ranging from 1 to 5 (1 – completely disagree, 5 – completely agree). The factors affecting online purchase decision consist of 5 variables. They were measured using the adopted customer review scale created by Hartanto et al., [2022] and other variables were adopted from Periera et al., [2023] scale. The online purchase decision was measured using the adopted Hanaysha [2018] scale. It consists of 3 variables. The customer satisfaction was measured using

the satisfaction with the purchase experience scale by Walsh and Sharon [2007], which consists of 3 variables. Risk perception was measured using the Internet usage riskiness scale created by Schlosser et al., [2006] and adopted to research. It consists of 3 variables. The construct and the accompanying variables are shown in Table 1.

Table 1. Constructs and variables

Construct	Item number	Item	Sources
FACTORS AFFECTING ONLINE PURCHASE DECISION	F1	Messages from Influencers can have an influence on my purchase decision.	Periera et al., (2023)
	F2	Sponsored articles published on the Internet can have an influence on my purchase decision.	
	F3	Ads related to some product or service I searched online (remarketing) could have an influence on my purchase decision.	
	F4	Online reviews can have an influence on my purchase decision.	Hartanto et al. (2022)
	F5	Online reviews help me make better purchase decision.	
ONLINE PURCHASE DECISION	OPD1	I often buy products or services online.	Hanaysha (2018)
	OPD2	Overall, I am satisfied with purchasing product or services online.	
	OPD3	I will positively recommend online shopping to others.	
SATISFACTION	S1	I am satisfied with the products and services bought online.	Walsh and Sharon (2007)
	S2	I am satisfied with the delivery service of the products purchased to your home address.	
	S3	I am overall satisfied with online shopping.	
RISK PERCEPTION	RP1	Sharing and sending personal data via Internet is risky for me.	Schlosser et al. (2006)
	RP2	Internet is a safe place for shearing and sending personal data.	
	RP3	I feel safe when sending my personal data via Internet.	

Source: Authors'

3.2. DATA COLLECTION AND SAMPLE

The data were collected from 200 respondents. The questionnaire was sent online as a Google Form through social networks and e-mail. Table 2 shows the sample description based on gender, age and how often respondents purchase products or services online.

Table 2. Sample structure (N=200)

Characteristics	Total	
	N	%
<i>Gender</i>		
Female	134	67.0
Male	66	33.0
<i>Age</i>		
18 – 25	47	23.5
26 – 35	90	45.0
36 – 45	43	21.5
46 – 55	11	5.5

56 – 65	8	4.0
Over 66	1	0.5
<i>How often do you purchase products or service online?</i>		
often	74	37.0
sometimes	87	43.5
rarely	36	18.0
never	3	1.5

Source: Authors'

Sample structure analysis shows that more women (67%) than man (48.8%) participated in the survey. The respondents were mainly younger people, between 26 and 35 years old (45%). The reason was that younger people spend more time on Internet purchasing product and services online then the elderly who are more traditional and still purchase product and services in stores. Regarding the question, *How often do they purchase products or services online?*, 43.5% of the respondents purchase products and services sometimes, while 37% of them buy them more often.

4. FINDINGS

The data analysis included a descriptive statistical analysis of the construct factors affecting online purchase decision, online purchase decision, customer satisfaction and risk perception and reliability analysis and dimensionality of the measurement scales. The descriptive analysis (Table 3) was conducted first, followed by the exploratory factor analysis to determine the dimensionality of the measurement scales. The reliability analysis was measured using the Cronbach alpha (Table 3). The multiple regression analysis of constructs, the factors affecting online purchase decision and the online purchase decision was applied to determine the influence of the factors affecting the online purchase decision on online purchase decision of online customers. The correlation analysis was used to compare the relationship between the constructs: online purchase decision, risk perception and customer satisfaction.

4.1. DESCRIPTIVE ANALYSIS

The descriptive analysis was conducted of the variables of constructs factors affecting online purchase decision, online purchase decision, consumer satisfaction and risk perception (Table 3).

Table 3. Descriptive statistics of variables and Cronbach alpha

Construct	Item number	Item	Arithmetic mean	Mode	Std. Dev.	Cronbach alpha
FACTORS AFFECTING ONLINE PURCHASE DECISION	F1	Messages from Influencers can have an influence on my purchase decision.	2.70	3	1.257	.784
	F2	Sponsored articles published on the Internet can have an influence on my purchase decision.	3.01	3	1.089	
	F3	Ads related to some product or service I searched online (remarketing) could have an influence on my purchase decision.	3.27	4	1.064	
	F4	Online reviews can have an influence on my purchase decision.	3.86	5	1.175	
	F5	Online reviews help me make better purchase decision.	4.05	5	1.058	

ONLINE PURCHASE DECISION	OPD1	I often buy products or services online.	3.97	4	1.109	0.683
	OPD2	Overall, I am satisfied with purchasing product or services online.	4.16	5	0.886	
	OPD3	I will positively recommend online shopping to others.	4.00	5	0.977	
SATISFACTION	S1	I am satisfied with the products and services bought online.	4.00	4	0.830	.721
	S2	I am satisfied with the delivery service of the products purchased to your home address.	4.07	5	0.967	
	S3	I am overall satisfied with online shopping.	4.19	4	0.739	
RISK PERCEPTION	RP1	Sharing and sending personal data via Internet is risky for me.	3.61	3	1.131	.607
	RP2	Internet is a safe place for shearing and sending personal data.	2.69	3	1.114	
	RP3	I feel safe when sending my personal data via Internet.	2.89	3	1.069	

Source: Authors'

The arithmetic means of the variables of the factors affecting purchase decision constructs (F) range from 2.70 to 4.05. Variable F1 has the lowest score, while the variable F5 has the highest score. Mode ranges from 3 to 5. The values of the standard deviation exceed 1, pointing to data dispersion. The variables of the arithmetic mean of online purchase decision construct (OPD) range from 3.97 to 4.00. The variable OPD1 has the lowest value while the variable OPD2 has the highest score. The mode range from 4 to 5. The values of the standard deviation are all below 1, except the variable OPD1. The values of the arithmetic mean with the regard to the customer satisfaction construct (S) range from 4 to 4.19. The variable S1 has the lowest value, and the variable S3 has the highest value. The mode range from 4 to 5. The values of the standard deviation are all below 1, so there is not any dispersion. The arithmetic mean of the variables of the risk perception construct (RP) range from 2.69 to 3.61. The variable RP2 has the lowest value and the variable RP1 has the highest value. All modes equal 3. The values of the standard deviation exceed 1, pointing to data dispersion.

4.2. VALIDATION OF THE MEASUREMENT SCALES

To determine the validity of the research instrument, an analysis of the dimensionality and reliability of the measurement scales was performed. The reliability of the measurement scales was confirmed by applying Cronbach's alpha coefficient of internal consistency. For the measurement scale of the factors affecting online purchase decision, dimensionality analysis was conducted using exploratory factor analysis. The results show that the adequacy measures of factors affecting online purchase decision construct are appropriate (KMO is 0.685, and Bartlett's test sphericity $\chi^2= 353.253$; $p<0.001$). Principal component analysis with varimax rotation of the factor axis was carried out. Table 4 shows that two factors were extracted using exploratory factor analysis for the factors affecting online purchase decision construct. Total percentage of the explained variance shows that the extracted factors contain 75.682% of information of all variables. This is a high percentage and points to a good relationship among the variables [Hair 2014: 115]. The eigenvalue of each extracted factor is over 1. The factor loadings for all factors are positive and exceed 0.50, which is considered high loading [Hair, 2014:115]. The number of variables in each factor is 3 and 2. Factor 1 is called "Digital marketing tools"; it contains 3 variables, which explains 53.926% of variance. Cronbach alpha is 0.805 which is considered high reliability [Petersen, 1994]. Factor 2 is called "Online reviews". It contains 2 variables, which explains 21.756% of variance. Cronbach alpha is 0.759 which is considered good reliability [Petersen, 1994].

Table 4. Exploratory factor analysis of the factors affecting online purchase decision

Item number	Variable	Factor loadings	Total variance explained (%)	Cronbach alpha
FACTOR 1 – DIGITAL MARKETING TOOLS			53.926	0.805
F1	Messages from Influencers can have an influence on my purchase decision.	.786		
F2	Sponsored articles published on the Internet can have an influence on my purchase decision.	.900		
F3	Ads related to some product or service I searched online (remarketing) could have an influence on my purchase decision.	.802		
FACTOR 2 – ONLINE REVIEWS			21.756	0.759
F4	Online reviews can have an influence on my purchase decision.	.904		
F5	Online reviews help me make better purchase decision.	.849		

Source: Authors'

Regarding, exploratory factor analysis of the online purchase decision construct, one factor was extracted. Total percentage of the explained variance shows that the extracted factors contain 62.360% of information of all variables. The factor loadings of all variables are positive and it exceeds 0.50. The number of variables is 3. Also, one factor was extracted using exploratory factor analysis of the consumer satisfaction construct. Total percentage of the explained variance shows that the extracted factors contain 66.213% of information of all variables. The factor loadings of all variables are positive and it exceeds 0.50. The number of variables are 3. The construct risk perception (information risk) had one factor which was extracted using exploratory factor analysis. Variable *RP1 Sharing and sending personal data via Internet is risky for me.* had a factor loading of 0.297 and was excluded from the further analysis. Total percentage of the explained variance shows that the extracted factors contain 82.060% of information of all variables. The factor loadings of all factors are positive and exceeds 0.50. The number of variables are 2.

Reliability analysis was conducted on the construct of online purchase decision, customer satisfaction and risk perception. The Cronbach alpha range from 0.629 to 0.781. Values of 0.7 are considered good reliability [Peterson, 1994].

Table 5. Multiple regression analysis for constructs factors affecting the online purchase decision and the online purchase decision

Independent variables	B	Std. Error	Beta	t	Sig.
(Constant)	7.680	.653		11.755	.000
DIGITAL MARKETING TOOLS	.115	.056	.143	2.047	.042
ONLINE REVIEWS	.431	.081	.370	5.316	.000
R2	0.447				
Adjusted R2	0.192				
Standard error	2.09937				
F ratio	24.603				
Significance	0.000				

Source: Authors'

The results of the regression analysis are statistically significant ($F=24.603$, $p=0.000$). The determination coefficient (R^2) totals 0.431, and the variables in the model share 43.1% of the common factors. The analysis confirms that the online reviews ($\beta=0.370$, $p=0.000$) have a considerable and significant impact on the online purchase decision, while digital marketing tools ($\beta=0.143$, $p=0.042$) are not considerable and are significant at level 0.05.

To confirm the relationship between the online purchase decision and the customer satisfaction, a correlation analysis was conducted using the Pearson correlation coefficient. A statistically positive medium relationship between the online purchase decision construct and the customer satisfaction construct ($r=0.644$, $p=0.000$) was established. Regarding a correlation analysis between constructs the risk perception and the customer satisfaction ($r=0.258$, $p=0.000$), a statistically significant but very weak correlation was established.

5. DISCUSSION AND CONCLUSION

This paper aims to empirically analyze which digital marketing factor have positive relationship on the online purchase decision and weather the online purchase decision and risk perception have positive effects on customer satisfaction. To achieve this goal, three hypotheses were set. A measuring instrument was designed and empirical research was carried out, which has resulted in important findings. The scale for measuring the factors affecting the online purchase decision was adopted and its reliability and dimensionality were verified. The results confirmed the validity of the scale for its application in the context of the factors affecting the online purchase decision.

The result of multiple regression analysis prove the first hypothesis (H1). There is a positive relationship between online reviews ($\beta=0.370$, $p=0.000$) and the online purchase decision. The customers often read other online reviews to find out what other customers experiences are about a products or services they purchase. It can be concluded that H1 hypothesis is supported.

The result of testing the hypothesis H2 align with the results of previous research conducted by Hossain et al., [2018] and Hartanto et al., [2023]. In this paper the online purchase decision positively affects customer satisfaction ($r=0.644$, $p=0.000$). Therefore, satisfied customers intend to purchase products or services online more often, and recommend it to others. Overall, customers are satisfied with purchasing products online. The H2 hypothesis was supported. Based on the result of H3 hypothesis testing, it is proven that there is a weak correlation ($r=0.258$, $p=0.000$) between risk perception and customer satisfaction. The results of testing this hypothesis are in line with the results of previous research conducted by Chen et al., [2015], Alcántara-Pilar et al. [2017] and Moon and Armstrong [2020]. The online customers are unable to physically assess the product before the purchase so sellers offer cues designed convey the quality of product or services offered, reduce risk perception and increase purchasing behavior [Mavlanova et al., 2016; Rosillo-Diaz et al., 2019].

It can be concluded that online reviews positively affect online purchase decision and online purchase decision positively affects customer satisfaction. There is significant but weak relationship between risk perception and customer satisfaction, which implies that further research must be conducted.

The implication of this research can provide significant contributions and benefits to the literature research. The theoretical implications provide scientific contribution and empirical

research by analyzing relationship between the constructs: factors affecting online purchase decision, online purchase decision, risk perception and customer satisfaction. The practical implication is to contribute to the development of digital marketing and online shopping by identifying factors affecting online purchase decision and building customer satisfaction. Also, online sellers must find a way to build trust with online customers by reducing risk perception especially regarding information risk so customers can feel safe when giving their personal data on Internet.

There are several limitations to this study. The research was conducted online and the respondents were mainly younger people. Further studies should be carried out on larger samples with different age groups. Further studies could investigate the influence of other constructs, such as loyalty, purchase intentions, other factors affecting online purchase decision, service quality and perceived value. In addition, a segmentation of different types of online customers can be made. There are also many cultural differences regarding online purchase decision making and risk perception so further research can be conducted with the sample of online customers between different countries and cultures.

REFERENCES

- [1] Abidin, C. (2016). Visibility labour: Engaging with Influencers' fashion brands and #OOTD advertorial campaigns on Instagram. *Media International Australia*, 161, pp 86–100, 2016.
- [2] Aghekyan-Simonian, M., Forsythe, S., Kwon, W. S., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services*, 19(3), 325-331. <https://doi.org/10.1016/j.jretconser.2012.03.006>
- [3] Al-Adwan, A. S., and Al-Horani, M. A. (2019). Boosting customer E-loyalty: an extended scale of online service quality. *Information*, 10:380, 2019., <https://doi.org/10.3390/info10120380>
- [4] Alcántara-Pilar, J. M., Blanco-Encomeinda, F. J., Armenski, T., Del Barrio-García, S. (2017). The antecedent role of online satisfaction, perceived risk online, and perceived website usability on the affect towards travel destinations. *Journal of Destination Marketing & Management*, pp 1-16, 2017., <http://dx.doi.org/10.1016/j.jdmm.2017.09.005>.
- [5] Alcántara-Pilar, J. M., Del Barrio-García, S., Porcu, L., Crespo-Almendros, E. (2015). Motivational duality in online consumer behaviour: Website usability and flow state as moderating factors. *International Journal of Business and Economics*, 14(1), pp 79–104, 2015.
- [6] Anderson, R. E., Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology and Marketing*, 20(2), 123–138.
- [7] Anumolu, K., Prasad H. C., S., Gopalkrishna, A. (2015). A Digital Marketing: A Strategic Outreaching Process. *International Journal of Management, IT and Engineering*, 7(5), pp 254-260, 2015.
- [8] Bauer, R. A. (1960). *Consumer behavior as risk taking*. In: Hancock, R. (ed) *Dynamic marketing for a changing world*. American Marketing Association, Chicago, pp 389–398, 1960.
- [9] Beneke, J., Sousa, S. D., Mbuyu, M., Wickham, B. (2016). The effect of negative online customer reviews on brand equity and purchase intention of consumer electronics in

- South Africa. *The International Review of Retail, Distribution and Consumer Research*, 26(2), pp 171–201, 2016.
- [10] Bhatnagar A., Misra S., Rao H. R. (2000). On risk, convenience, and internet shopping behavior. *Communication of the ACM*, 43(11), pp 98–114, 2000.
- [11] Bray, J. (2008). Consumer Behaviour Theory: Approaches and Models. https://eprints.bournemouth.ac.uk/10107/1/Consumer_Behaviour_Theory_Approaches_%26_Models.pdf [01.08.2023]
- [12] Chevalier, J.A. and Mayzlin, D. (2006). The effect of word of mouth on sales: online book reviews. *Journal of Marketing Research*, 43(3), pp. 345-354, 2006.
- [13] Chiu, C. M., Hsu M. S., Lai H., Chang, C. M. (2012). Re-examining the influence of trust on online repeat purchase intention: the moderating role of habit and its antecedents. *Decision Support System*, 53(4), pp 835–845, 2012.
- [14] Cox, D. F. (1967). *Risk handling in consumer behavior: An intensive study of two cases*. In Risk taking and information handling in consumer behavior, pp 34-81. Harvard University Press
- [15] Cunningham, S. M. (1967). *The major dimensions of perceived risk. Risk taking and information handling in consumer behavior*. Harvard University.
- [16] Dai, B., Forsythe, S., & Kwon, W. S. (2014). The impact of online shopping experience on risk perceptions and online purchase intentions: Does product category matter?. *Journal of Electronic Commerce Research*, 15(1), pp 13–24, 2014.
- [17] Dwidienawati, D., Tjahjana, D., Bramantoro, S., & Gandasari, D. (2020). Customer review or influencer endorsement: which one influences purchase intention more? *Heliyon*, 6(11), pp 1–11, 2020, <https://doi.org/10.1016/j.heliyon.2020.e05543>
- [18] Farivar, S., Turel, O., Yuan, Y. (2017). A trust-risk perspective on social commerce use: An examination of the biasing role of habit. *Internet Research*, 27(3), pp. 586–607, 2017, <https://doi.org/10.1108/IntR-06-2016-0175>
- [19] Farivar, S., Turel, O., Yuan, Y. (2018). Skewing users' rational risk considerations in social commerce: An empirical examination of the role of social identification. In *Information & Management*, 2018.
- [20] Gil-Gomez, H., Guerola-Navarro, V., Oltra-Badenes, R., Lozano-Quilis, J. A. (2020). Customer relationship management: digital transformation and sustainable business model innovation, *Economic Research*, 33(1), pp 2733-2750, 2020.
- [21] Hanaysha, J. R. (2018). An examination of the factors affecting consumer's purchase decision in the Malaysian retail market, *PSU Research Review*, 2(1), pp 7–23, 2018, <https://doi.org/10.1108/PRR-08-2017-0034>
- [22] Hartanto, N., Mani, L., Jati, M., Josephine, R., Hidayat, Z. (2022). Factors Affecting Online Purchase Decision, Customer Satisfaction, and Brand Loyalty: An Empirical Study from Indonesia's Bigget E-Commerce. *Journal of Distribution Science*, 20(11), pp. 33-45, 2022.
- [23] Hendriyani, C., Auliana, L. (2018). Transformation from Relationship Marketing to Electronic Customer Relationship Management: A Literature Study. *Review of Integrative Business and Economics Research*, 7(2), 2018.
- [24] Hidayat, A., Wijaya, T., Ishak, A., Catyanadika, P. E. (2021). Consumer trust as the antecedent of online consumer purchase decision. *Information*, 12(4), 145, 2021.
- [25] Javed, M. K., and Wu, M. (2020). Effects of online retailer after delivery services on repurchase intention: an empirical analysis of customers' past experience and future confidence with the retailer. *Journal of Retailing and Consumer Services*, 54, 101942, 2020., <https://doi.org/10.1016/j.jretconser.2019.101942>

- [26] 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 System*, 44(2), pp 544–56, 2008.
- [27] Kotler, Ph., Armstrong, G. (2018). *Principle of Marketing*, Pearson Education, New York, USA
- [28] Li, Y. H., Kou, G., Li, G. X., Wang, H. M. (2021). Multi-attribute group decision making with opinion dynamics based on social trust network. *Information Fusion*, 75, pp 102–115, 2021.
- [29] Legler, S. (2015). Digital CRM 2.0: Building customer relationships in the digital landscape, *Deloitte*, 2015.
- [30] Liang, Q., Liao, X., Shang, J., 2020. A multiple criteria approach integrating social ties to support purchase decision. *Computers & Industrial Engineering*, 147, 106655, 2020.
- [31] Mavlanova, T., Benbunan-Fich, R., Lang, G. (2016). The role of external and internal signals in e-commerce. *Decision Support Systems*, 87, pp 59-68, 2016.
- [32] Moon, Y., Armstrong, D., J. (2020). Service quality factors affecting consumer attitudes in online-to-offline commerce. *Information Systems and e-Business Management*, 18(1), pp 1-34, 2020.
- [33] Muller, P., Damgaard, M., Litchfield, A., Lewis, M., Hörnle, J. (2011). Consumer behaviour in a digital environment. European Parliament's Committee on Internal Market and Consumer Protection, 2011.
- [34] Nguyen, D., H., de Leeuw, S., Dullaert, W. (2018). Consumer Behaviour and Order Fulfilment in Online Retailing: A Systematic Review. *International Journal of Management Reviews*, 20, pp 255–276, 2018.
- [35] Oliver, R. L. (1993). Cognitive, affective and attributes of the satisfaction response. *Journal of Consumer Research*, 20(2), pp 418–430.
- [36] Oliver, R. L. (2010). *Satisfaction: A behavioral perspective on the consumer (2nd ed.)*. Armonk, NY: M.E. Sharpe, 2010.
- [37] Onete, C. B., Teodorescu, I., Vasile, V. (2016). Analysis Components of the Digital Consumer Behavior in Romania, *Amfiteatru Economic Journal*, ISSN 2247-9104, 43(18), pp 654-662, 2016.
- [38] Park, D., Kim, S. (2008). The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews, *Electronic Commerce Research and Applications*, 7(4), pp 399–410, 2008.
- [39] Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), pp 101-134, 2003.
- [40] Peterson, R. A. (1994). A meta-analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research*, 21(2), pp 381-391, 1994.
- [41] Pereira, J. M. S., Cardoso, A., Canavarro, A., Figueiredo, J., Garcia, J. E. (2023). Digital Influencers' Attributes and Perceived Characterization and Their Impact on Purchase Intentions. *Sustainability*, 15, 12750, 2023., <https://doi.org/10.3390/su151712750>
- [42] Pereira, H. G., Salgueiro, M., & Rita, P. (2016). Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism. *Journal of Retailing and Consumer Services*, 30, pp 279– 291, 2016.
- [43] Pereira, H. G., Salgueiro, M. D. F., Rita, P. (2017). Online determinants of e-customer satisfaction : application to website purchases in tourism. *Service Business*, 11(2), pp 375–403, 2017, <https://doi.org/10.1007/s11628-016-0313-6>
- [44] Prasad, S., Garg, A., Prasad, S. (2019). Purchase decision of generation Y in an online environment. *Marketing Intelligence & Planning*, 0263-4503, 2019., <https://doi.org/10.1108/MIP-02-2018-0070>

-
- [45] Prasad, S., Gupta, I.C. and Totala, N.K. (2017). Social media usage, electronic word of mouth and purchase-decision involvement. *Asia Pacific Journal of Business Administration*, 9(2), pp 134-145, 2017.
- [46] Ramyan, N., Ali, M. (2016). Factors affecting consumer-buying behavior. *International Journal of Applied Research*, 10(2), pp 76-80, 2016.
- [47] Rosillo-Diaz, E., Blanco-Encomienda, F., J., Crespo-Almendros, E. (2020). A cross-cultural analysis of perceived product quality, perceived risk and purchase intention in e-commerce platforms. *Journal of Enterprise Information Management*, 33(1), pp 139-160, 2020.
- [48] Ryan, D. (2014). *Understanding Digital Marketing*. Kogan Page, Third edition, 2014.
- [49] Sandeep P., Arjita J. (2018). Digital Marketing: Concepts & Aspects. *International Journal of Advanced Research* 7(2), pp 260-266, 2014.
- [50] Saura, J., Reyes-Menendez, A., Matos, N., Correia, M., Palos-Sanchez, P. (2020). Consumer Behavior in the Digital Age. *Journal of Spatial and Organizational Dynamics*, 8, pp 190-194, 2020.
- [51] Schlosser, A. E., White, T. B., Lloyd, S. M. (2006). Converting Web Site Visitors into Buyers: How Web Site Investment Increases Consumer Trusting Beliefs and Online Purchase Intentions. *Journal of Marketing*, 70 (2), pp 133-148, 2006.
- [52] Schwarzl, S. Grabowska, M. (2015). Online marketing strategies: The future is here. *Journal of International Studies*. 8, pp 187-196, 2015.
- [53] Song, Y.M., Hu, J., 2019. Large-scale group decision making with multiple stakeholders based on probabilistic linguistic preference relation. *Applied Soft Computing*, 80, pp 712–722, 2019.
- [54] Song, Y., Li, G., Li, T., Li, Y. (2021). A purchase decision support model considering consumer personalization about aspirations and risk attitudes. *Journal of Retailing and Consumer Services*, 63, pp 1-11, 2021.
- [55] Song, Y. M., Li, G. X., Ergu, D. J., Liu, N. (2021). An optimization-based method to conduct consistency and consensus in group decision making under probabilistic uncertain linguistic preference relations. *Journal of the Operational Research Society*, pp 1-15, 2021., <https://doi.org/10.1080/01605682.2021.1873079>
- [56] Tang, F. (2020). The more interactivity the better? Investigating interactivity, task complexity, and product knowledge in online purchase decisions. *Information Technology and Management*, pp 1-11, 2020., <https://doi.org/10.1007/s10799-020-00316-2>
- [57] Tang, L., Jang, S. (2008). Tourism information trust as a bridge between information value and satisfaction: An exploratory study. *Tourism Analysis*, 13(5–6), pp 565–578, 2008.
- [58] Ugonna, I., A., Okolo, V. O., Nebo, G. N., Ojize J. (2017). Effects of Online Marketing on the Behaviour of Consumers in Selected Online Companies in Owerri, Imo State – Nigeria. *International Journal of Business and Management Invention*, 6(6), pp 32-43, 2017.
- [59] Veleva, S. S., Tsvetanova, A. I. (2020). Characteristics of the digital marketing advantages and disadvantage. In: IOP Conference Series: Materials Science and Engineering, Volume 940, International Scientific Conference Digital Transformation on Manufacturing, Infrastructure and Service 21-22 November 2019, St. Petersburg
- [60] Verma, P., Pant, M. K. (2021). The Effect of Price Verification, Product Display, Assortment Satisfaction upon Overall Satisfaction, Online Repatronage Intention, and Customer Loyalty. *Journal of Food Products Marketing*, 27(6), pp. 291-318, <https://doi.org/10.1080/10454446.2021.1994078>
-

- [61] Walsh, G., Sharon E. B. (2007). Customer-Based Corporate Reputation of a Service Firm: Scale Development and Validation. *Journal of the Academy of Marketing Science*, 35 (1), pp 127-143, 2007.
- [62] Yan, Q., Wu, S., Wang, L., Wu, P., Chen, H., & Wei, G. (2016). E-WOM from e-commerce websites and social media: Which will consumers adopt?. *Electronic Commerce Research and Applications*, 17, pp 62–73, 2016.
- [63] Zhou, R., Wang, X., Shi, Y., Zhang, R., Zhang, L., Guo, H. (2019). Measuring e-service quality and its importance to customer satisfaction and loyalty: an empirical study in a telecom setting. *Electronic Commerce Research*, 19, pp 477–499, 2019. <https://doi.org/10.1007/s10660-018-9301-3>

