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Price search behaviour in digital markets – A perspective from Romania

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Abstract. *Price represents a source of information customers may rely on in the buying decision making process. The literature in this area shows that on the Internet, the process of searching for price information is more complex than on traditional stores, being influenced by various factors. This paper aims to identify and describe the relations between two categories of variables. On the one hand there are the variables related to the price searching behaviour on the online environment, and on the other hand there are the variables related to the buying process. This research is based on a survey, the sample consisting of 1112 online buyers. The relationships between these variables were represented through a conceptual model based on a structural equation modeling approach. The main findings of the research show that the more a customer searches for price information online, the more he/she acquires abilities to search, becoming more predisposed to perceive a better value from shopping online and intending more to purchase from the Internet. The managerial implications concern the communication strategies adopted by online stores, the information provided by them influencing the perceived value of doing online shopping and the buying intentions on the Internet.*

Keywords: price search behaviour; perceived value; online; price sensitivity; survey.

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Introduction

The increasing role of electronic commerce in economy has heightened the interest the online shopping behaviour has in academic area. One of the most important sources of information customers may rely on in buying decision making is represented by price. Online pricing is rather different from pricing in off-line buying context considering aspects as: price transparency, price dispersion or price sensitivity. In a recent study, Wang and Li

(2020) find large and persistent transaction price dispersion on the Internet as a result of sellers' engagement in strategic pricing behaviors.

A central issue in pricing studies is represented by price searching behaviour on digital markets, consumers engaging in price search activities differently, depending on various factors as motivations, perceived opportunity costs or perceived benefits. Searching online price information may become more complex due to the increasing number of price-related online sources of information or to the customer increased accessibility to price data facilitated by the new technologies. Consumers are more and more confronted with information sources in the online environment such as: sellers' web-sites, online advertisements, price-comparison sites, online reviews or social networks, making the price searching process more complex. The process becomes even more complex if consumers try to make comparisons with offline prices, which has generated new controversy over the unification or discrimination of prices in offline and online channels (Homburg et al., 2019).

Previous studies focused on the influence of online price information on several variables such as: the perceived value of online products (Lo et al., 2013), the buying intentions (Wu et al., 2013), the buying behaviour in traditional stores (Bodur et al., 2014; Jang et al., 2017) or the price satisfaction (Jang et al., 2017). However, little information has been provided in the literature on the influence of online price search variables (such as: price information sources, search ability, online price sensitivity, online price search effort) on the perceived value of doing online shopping and on the online buying intentions. Furthermore, the previous studies on price search behaviour have been focused more on developed countries, almost neglecting the phenomenon in developing countries. The approach of this topic in a developing country is motivated also by some differences comparing to developed countries: the Internet access is lower (Paushter, 2016) and some variables influencing Internet usage are different (Bagchi et al., 2015). Searching for price information in the online environment may have sustainable effects, taking into account the higher availability of information sources on the Internet and the lower effort customers have to encounter comparing to the off-line environment.

The Romanian online market is very dynamic, in recent years the volume of online transactions has hugely increased, this trend being predicted to maintain for the near future. According to the Romanian Association of Online Stores, in 2017 the turnover of online transactions in Romania was 2.8 billion Euros (ARMO, 2018). In 2018 it rose up to 3.5 billion Euros, being estimated to exceed the threshold of 5 billion in 2020 (GPEC, 2019). The Romanian e-commerce market accounts for 8% of the total retail market, a rather small share compared to the developed countries (GPEC, 2019).

In this context, we identified a real need to investigate the price search behaviour of online buyers in Romania, proposing a model on the influence of certain online price search variables on shopping intentions.

The research conducted for the present paper is based on a survey at national level on Romanian online buyers, carried out in 2016. The body of the paper is divided into five sections. The first section deals with a literature review on online price search process, providing the theoretical background taken into account in the hypotheses release process. In the next section, the research methodological coordinates are presented, alongside with a discussion of data collection methods and data analysis approach. The third section presents the research results and discussion, making reference to the acceptance of

hypotheses and to the validation of the proposed model. The paper ends with conclusions, limitations and further research, emphasizing the challenge this topic may pose in the academic area.

LITERATURE REVIEW

Online pricing

In the online environment, price setting process is more complex comparing to the traditional stores, taking into account the higher transparency of price information, the easiness of price searching process facilitated by the technological equipment involved in this action or the diversity of price information sources. A large and growing body of literature has been published on online prices, two major topics being approached in a higher extent: price level (Lehmann 2003; Zettelmeyer et al., 2006; Xing and Tang, 2004; DiRusso et al., 2011) and price dispersion (Petrescu, 2011; Lehmann, 2003) in the online environment.

Various studies investigated the price level in the online stores, comparing to traditional stores, but the results are divergent. Thus, Lehmann (2003), analysing the prices of holiday packages across conventional and Internet channels, argued that price levels are quite similar on the Internet and on conventional markets. Contrary to these findings, some authors (Zettelmeyer et al., 2006) found that prices are lower on the Internet than in the traditional stores. Other studies consider that among the online retailers are differences according to their status. Thus, Xing and Tang (2004) demonstrated that prices set by online-only retailers are lower than prices of online multi-channel retailers by an average of 6.8 percent. Charging higher prices in the online environment can be associated with some retailers' characteristics. In this sense, DiRusso et al. (2011) argued that setting higher prices is an action encountered by retailers that undertake some actions as: to post online additional information (contact options, information on their return policy), to display a retail brand logo, to offer a wider assortment.

Price dispersion is the variation of prices for the same product in different markets (Petrescu, 2011). The high transparency of price information and of the reduced searching cost in the online environment lead to an expected price dispersion extremely low (to tend to 0), various studies contradicting this assumption. Thus, on the one hand, Lehmann (2003) states the online price dispersion is quite similar to offline price dispersion, no significant differences between the two types of stores being encountered. On the other hand, Petrescu (2011) demonstrated that in the online environment price dispersion exists, even within the products offered by the same online shopping mall.

Online search behaviour

A considerable amount of literature has been published on the online search behavior, considering the importance and the dynamics of the area of online commerce. These studies were oriented on topics regarding: the patterns used by online shoppers in searching behaviour of different products/brands (Branco et al., 2012; Pozzi, 2012), the effort encountered in online search (Johnson et al., 2004), the tools used in doing online shopping (Häubl and Trifts, 2000) or the models adopted by the online customers in their searching behaviour (Ratchford et al., 2003; Park and Kim, 2003; Moe and Yang, 2009). Despite the

growing time spent on the Internet by the individuals, Johnson et al. (2004) stated that the amount of online search effort for shopping is quite reduced, buyers using to search for a low number of sites during a month. A consumer searches for product information whenever their valuation of the product is in between two purchase thresholds, determined by the informativeness and the marginal cost of search (Branco et al., 2012)

Concerning the information sought, brand exploration in brick-and-mortar stores is more prominent then in the online environment, whereas some features of web sites diminishes the online brand exploration (Pozzi, 2012). Also, the searching behaviour is different according to the product category. Kim et al. (2011) showed that for camcorder category, the search behaviour is price driven, brand attributes playing a much lower role than price. The searching effort might be diminished by using some interactive decision tools (Häubl and Trifts, 2000).

Considering the complexity of the decision making process in the Internet transactions, several authors proposed and validated certain models of searching behaviour for many types of information: product features, prices, promotional messages, warranties, brands. In a model designed for searching behaviour for automobiles, Ratchford et al. (2003) showed that search depends on potential gains, prior information, productivity at obtaining information and time costs. In a purchase behaviour a in the online context model, Park and Kim (2003) have demonstrated that consumer's site commitment is significantly influenced by factors as: user interface quality, product and service information quality and site awareness. Among the socio-demographic variables that influence the search behaviour, Ratchford et al. (2003) argued that the users of the Internet as source of information for automobile shopping are young and educated. Consumer's search intention for a Web site can be divided into the baseline preference for the site (buyer's preference to search a certain site) and the inertial effect (the habit for the shopper to search a certain site), the last one being more prominent, but vulnerable when a new competitor entry the market (Moe and Yang, 2009).

Price search behaviour in the online context

One of the most valuable information required during the process of searching for shopping online is represented by price. In the academic area, price searching behaviour was firstly analysed in the traditional stores context (Urbany et al., 1996; Gauri et al., 2008). Nowadays, the interest in online price searching has increased, being influenced by the growing rate of Internet penetration in goods shopping or by the increased pace of innovation in online searching tools. Despite the complexity of this phenomenon, only few studies have attempted to explain the online searching behaviour, taking into account the factors that influence it. Jiang (2002) has only proposed a model that included two composite variables (perceived search efficiency and motivation to price search) without testing the relationship between them on a real market. Several studies validated some models in order to describe a certain type of price search behaviour (Kumar et al., 2005; Ramos, 2003). Canova and Nicolini (2019) have evaluated some factors of influence for online price search process (the day of the week and the weather conditions), price searches being more intense during weekdays, especially on Mondays and under bad weather conditions.

Urbany et al. (1996, p. 92) have defined price search as "the effort expended in obtaining and comparing the prices of competitive stores". According to Ramos (2003) the ability to

online price search is the individual's cognitive capability to search and process information. Consumers are able to search more information sources and gain more benefits from search as the education level and the Internet experience increase (Dutta and Das, 2017). Considering the devices utilized in the online price search, the mobile devices are used more during the weekends, whereas the desktops usage is more intense at the beginning of the week (Canova and Nicolini, 2019). In the analysis of consumers' online information search behaviour, Wang et al. (2018) showed that consumers search more for experience products (whose attributes could be known before purchase), than for search products (whose attributes could be known after the use of product). The same idea is highlighted by Bei et al. (2004) who argue that various types of online information sources (from other consumers, from retailers or neutral) are used in different measures to search information for experience products or for searching products. Songpol et al. (2004) consider that experience with technology improves individuals' ability to search, whereas Wang et al., (2018) demonstrated that the online purchase experience increases pre-purchase search. Taking into account these studies, we may consider that the usage of online price information sources is a way of gaining experience and may lead to improve searching abilities. Consequently, we may put forward the first hypothesis:

H_1: The usage of online price information sources is positively related to the ability to search for prices online

Shoppers' price searching behaviour in traditional stores might be classified in four categories ("incidental price search", "temporal price search", "spatial price search", "spatiotemporal price search") according to the individual's proneness to search across stores or across time (Gauri et al. ,2008) .

Price comparison sites represent a valuable source of information in the online environment. The prices displayed on this type of sites might become reference prices with a probability to influence the price attractiveness in the following off-line shopping occasions the online customers will have (Bodur et al., 2014). Jung et al. (2014) showed that information provided by the price comparison sites increases the transaction and acquisition value for non-look-and-feel product category (e.g., notebook computers). The price consciousness of the online shoppers influences the value perception, even when the price comparison site information is not provided (Jung et al., 2014). Consequently, we may assume that consumers more price conscious are more able to search for price online and perceive a higher value of doing online shopping. The second hypothesis advanced is:

H_2: The ability to search for prices online is positively related to the perceived value of doing online shopping

Various studies investigated the online price search sacrifice from different points of view: time per search task (Jiang, 2002), costs of online price search (Ramos, 2003), costs of information search on price (Shankar et al., 2001). In the offline environment, Urbany et al. (1996) defined search costs taking into account several variables: time constraints, mobility constraints, difficulty of stores comparisons, and presence of young children. Kumar et al. (2005) have defined the search cost as the time spent by using a certain searching engine

and have shown that lower search costs lead to lower online prices, higher price elasticities and lower price dispersion.
Price sensitivity is a measure of consumers' interest to price. Concerning the shopping environment, Chu et al. (2005) consider households manifest lower price sensitivity when they shop online than when they shop offline. Shankar et al. (2001) have analyzed price sensitivity through two aspects: the price importance (the weight attached by customers to price as compared to other attributes) and the price search (customers' propensity to search for better prices). Taking into account the relationship between price sensitivity and price search effort, we may assume that the more price sensitive people, the more interested they become in searching for price information, putting forward the third hypothesis:

H_3: Price sensitivity is positively related to the online price search effort

Dutta and Das (2017) consider the search efforts are inversely related to the income and the Internet cost, such as if the income and the Internet cost become higher, the search effort decreases. Jiang (2002) considers the perceived benefits of search influences indirectly the online price search, mediated by the motivation to price search. Ramos (2003) argued that the perceived costs of online price search might be defined through several variables (perception on monetary expenditure, time sacrifice, physical effort, psychological sacrifice on searching price in the online environment) and that they negatively influence the motivation for online price search. The same author included the benefits of online price search into perceived motivation to online price search construct (Ramos, 2003). Thus, we may assume the more a customer searches for price information, the more they are convinced they will obtain a better value for doing online shopping. Consequently, we put forward the following hypothesis:

H_4: The effort of online price search is positively related to the perceived value of doing online shopping

Kumar et al. (2005) demonstrated that user's ability (user's experience concerning the usage of search engines and his/her knowledge of searching process) influences search performance in the online environment (measured by search costs and user satisfaction).
According to Wang et al. (2018), the use of information advanced technologies (Internet connection speed, price comparison websites) induces more searches, thus increasing the search effort. Taking into account that as an individual is exposed to more advanced technologies, he/she earns a higher ability to search, we may assume that:

H_5: The online price search effort is positively related to the ability to search for prices online

Concerning ride-sharing services, Wang et al. (2019) showed that the perceived value is positively related with the willingness to use this type of services. In a more detailed manner, Wan et al. (2017) showed that the perceived value of online customization (divided in perceived value of results and perceived value of processes) has a positive effect on purchase intention. Thus, we may assume the higher the perceived value for a product, the more likely it is that the customer would manifest his/her willingness to buy that

product. Considering the relationship between the perceived value of doing online shopping and the buying intentions, the last hypothesis is formulated as follows:

H_6: The perceived value of doing online shopping is positively related to the online buying intentions

Considering these hypotheses, we defined the research variables and the data collection instrument. In this approach, it was envisaged the necessity to evaluate the relationships between research variables and to propose a model aimed at representing the process of searching for price information in the online environment. The proposed model is presented in Figure 1.

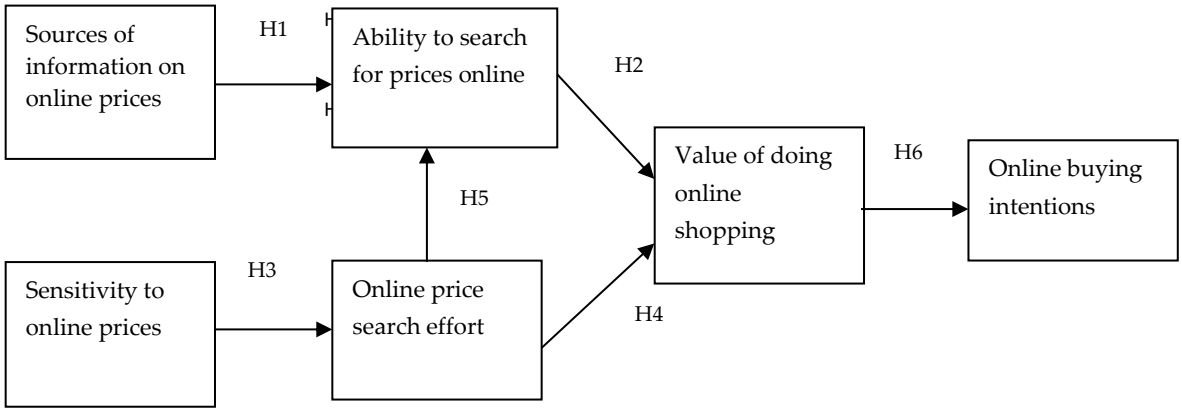


Fig. 1 The proposed model for price searching in the online environment

This model will be tested in the data analysis section of the paper.

Research Methodology

Data Collection Method

In order to test the research hypotheses, we carried out a national survey on the Romanian online buyers. In this respect, data was collected between March and May 2016, being used an online survey platform (http://www.isondaje.ro/sondaj/425641468/). The sample consisted of 1112 persons who had done online shopping during the previous year. The initial sample consisted of 1914 responses, the collected data being cleaned and adjusted. One of the statistical adjustment procedure is represented by data weighting that make the sample data more representative of a statistical population on some characteristics (Malhotra et al., 2017). For selecting the respondents, a convenience sampling was used, which is a non-probability sampling method (Malhotra et al., 2017). The sample structured by age, gender and education is presented in Table 1.

Table 1 The sample structure

Variables of the sample		Number of consumers	Percent
Age	18-25	456	41.0%
	26-35	354	31.8%
	36-45	178	16.0%
	46-55	104	9.4%
	Over 55	20	1.8%
Gender	Male	428	38.5%
	Female	684	61.5%
Education	Elementary school	5	0.4%
	High school	463	41.6%
	Post secondary school	72	6.5%
	University	471	42.4%
	Postgraduate studies	100	9.0%
	Total	1112	100%

Source: Authors' own research results

The questions included into the questionnaire were open-ended, closed-ended, mixt, some of them using scales as Likert or semantic differential. Data management was performed using Excel, whereas for testing the proposed model was applied a multivariate data analysis technique, in particular the structural equation modeling using the partial least square (PLS) approach. In this respect, the Warp PLS 5.0 software has been used (ScriptWarp Systems, 2015).

Data Analysis

With the purpose of analyzing data, a structural equation modelling procedure (SEM) was applied. A variant of SEM is represented by partial least square (PLS) that is more appropriate for data not normally distributed (Monecke and Leisch, 2012). The latent variables considered for this study are designed by using scales such as semantic differential and the Likert scale (Table 2). In defining these variables, several studies were taken into account: Chih-Chung and Chang (2005), Urbany et al. (1996), Kumar et al. (2005), Jiang (2002), Ramos (2003), Fang et al. (2016).

Table 2 Definition of latent variables

Construct	Item	Scale
Sources of information on online prices (Sources)	**Sources 1**: Suppliers' web sites	1 - Not at all 2- At a very low extent 3- At a low extent 4- At a mediul extent 5- At a great extent 6 - At a very great extent
	Sources 2: Online advertising	
	Sources 3: Blogs, forums	
	Sources 4: Discussions with friends, relatives	
	Sources 5: Price comparison sites	
	Sources 6: Buyers' reviews	
The ability to search for prices online (Abil_s)	**Abil_s1:** It is easier to obtain price information online than from traditional stores (off-line)	1 - Strongly disagree 2- Disagree 3- Neutral 4- Agree 5 - Strongly agree
	Abil_s2: I like to search for price information in order to do online purchases	
	Abil_s3: The more I search for price information online, the more I am convince I do a better choice	
The online price	**Effort 1:** When I want to purchase online I spend	1 - Strongly disagree

search effort (Effort)	more time searching for information on price	2- Disagree 3- Neutral 4- Agree 5 - Strongly agree
	Effort 2: I compare the online prices with the prices I saw previously	
	Effort 3: I compare the online prices with Internet prices set by other suppliers	
	Effort 4: I compare the online prices with the offline prices of the same products	
Sensitivity to online prices (Sens)	**Sens 1:** The most often I buy the on sale products	1 - Strongly disagree 2- Disagree 3- Neutral 4- Agree 5 - Strongly agree
	Sens 2: I visit many online stores to benefit from the lowest price	
	Sens 3: Searching online information helps me to find the lowest price	
	Sens 4: When I shop online, I am interested in obtaining the best price-quality trade-off	
Value of doing online shopping (Value)	**Value 1:** It is worth to do online shopping	1 - Strongly disagree 2- Disagree 3- Neutral 4- Agree 5 - Strongly agree
	Value 2: In the online stores there are many price promotions for the same product than in the offline stores	
	Value 3: The discounts from online stores are more attractive than those from offline stores	
	Value 4: The benefits obtained doing online shopping are higher than the costs	
Online buying intentions (Intent)	**Intent 1:** I recommend online shopping	1 - Strongly disagree 2- Disagree 3- Neutral 4- Agree 5 - Strongly agree
	Intent 2: I intent to extend my online shopping	

In order to assess construct reliability, Cronbach's Alpha scores and composite reliability of the latent variables are determined (Table 3). The values of Cronbach's Alpha coefficients are higher than 0.6, showing a moderate reliability (Hinton, 2004). Concerning the composite reliability, the scores for all latent variables exceed 0.7, value that provides a good reliability (Malhotra et al., 2017). Considering these results, we may state the latent variables defined in the model are reliable.

Table 3 Latent variables coefficients

Variable	**sources**	**abil_s**	**effort**	**value**	**sens**	**intent**
Cronbach's Alpha	0.666	0.632	0.791	0.663	0.661	0.645
Composite reliability	0.782	0.804	0.865	0.798	0.798	0.849
AVE	0.383	0.582	0.618	0.498	0.502	0.738
VIF	1.370	1.904	1.871	1.725	1.886	1.468

Source: Authors' own research results

Construct validity is evaluated taking into account convergent and divergent validity. From Table 4 results that the factor loadings (represented in brackets) are equal or higher than 0.5, value considered acceptable (Hair et al., 2017). Another indicator taken into account in

estimating the convergent validity is represented by the average variance extracted (AVE), that should exceed the threshold of 0.5 (Malhotra et al., 2017; Kock, 2015). From Table 3 results that this condition is accomplished, except for the variable sources of information on online prices. These results prove that the convergent validity of the model is assured.

Table 4 Structured loadings and cross-loadings

Variable Indicator	Sources	Abil_s	Effort	Value	Sens	Intent	SE	P value
Sources1	(0.500)	0.253	0.261	0.380	0.358	0.251	0.029	<0.001
Sources2	(0.649)	0.213	0.199	0.297	0.232	0.218	0.028	<0.001
Sources3	(0.763)	0.230	0.285	0.257	0.215	0.200	0.028	<0.001
Sources4	(0.506)	0.078	0.185	0.151	0.131	0.059	0.029	<0.001
Sources5	(0.500)	0.312	0.318	0.260	0.239	0.215	0.029	<0.001
Sources6	(0.732)	0.242	0.305	0.252	0.262	0.202	0.028	<0.001
Abil_s1	0.237	(0.610)	0.276	0.331	0.325	0.244	0.029	<0.001
Abil_s2	0.293	(0.829)	0.594	0.338	0.493	0.289	0.028	<0.001
Abil_s3	0.279	(0.828)	0.437	0.355	0.513	0.304	0.028	<0.001
Effort1	0.311	0.470	(0.712)	0.311	0.452	0.221	0.028	<0.001
Effort2	0.338	0.507	(0.858)	0.254	0.502	0.229	0.028	<0.001
Effort3	0.331	0.483	(0.830)	0.295	0.494	0.282	0.028	<0.001
Effort4	0.328	0.376	(0.734)	0.278	0.428	0.175	0.028	<0.001
Value1	0.262	0.291	0.239	(0.663)	0.281	0.607	0.028	<0.001
Value2	0.276	0.330	0.267	(0.729)	0.307	0.303	0.028	<0.001
Value3	0.344	0.330	0.281	(0.745)	0.342	0.314	0.028	<0.001
Value4	0.308	0.303	0.225	(0.682)	0.247	0.321	0.028	<0.001
Sens1	0.272	0.314	0.308	0.225	(0.556)	0.121	0.028	<0.001
Sens2	0.282	0.449	0.527	0.298	(0.821)	0.206	0.029	<0.001
Sens3	0.283	0.582	0.516	0.352	(0.712)	0.278	0.028	<0.001
Sens4	0.247	0.318	0.316	0.304	(0.718)	0.131	0.028	<0.001
Intent1	0.242	0.315	0.240	0.505	0.261	(0.859)	0.028	<0.001
Intent2	0.285	0.316	0.258	0.423	0.191	(0.859)	0.028	<0.001

Source: Authors' own research results

For each indicator, the loadings with the associated latent variable (mentioned within parentheses) should be higher than any of its cross-loadings on other latent variables (Hair et al. 2017), this condition being accomplished (Table 4).

Table 5 Correlations among latent variables with squared roots of AVE

	Sources	Abil_s	Effort	Value	Sens	Intent
Sources	**0.619**					
Abil_s	0.354*	**0.763**				
Effort	0.415*	0.586*	**0.786**			
Value	0.423*	0.445*	0.359*	**0.706**		
Sens	0.380*	0.591*	0.598*	0.418*	**0.708**	
Intent	0.307*	0.367*	0.290*	0.540*	0.264*	**0.859**

* p<0.05

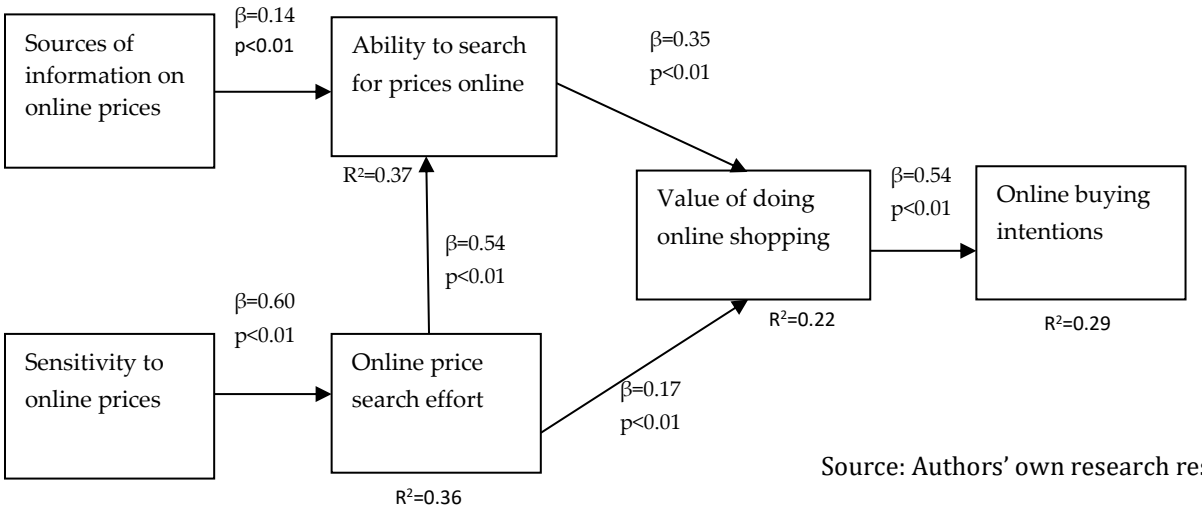
Source: Authors' own research results

Also, from Table 5 results that for each latent variable, the square root of AVE (displayed on the main diagonal) is greater than any correlations of latent variables (Fornell and Larcker, 1981). Thus, we may conclude that the discriminant validity of the construct is assured. In

order to estimate the collinearity between the latent variables, the variance inflation factor (VIF) was assessed. It measures the degree to which the standard error increased because of collinearity and should be lower than 5 (Hair et al. 2017). From Table 3 results that the values of VIF are lower than 2, thus the proposed model is not affected by collinearity.

Results and discussion

In order to test the conceptual model for price searching in the online environment the procedures characteristic to Structural Equation Modeling was applied, using WarpPLS 5.0 software (ScriptWarp Systems, 2015). The resulted model is presented in Fig. 2.



Source: Authors' own research results

Fig. 2 The resulted model of searching for price information in the online environment

From Figure 2 results that the usage of online price information sources significantly influences the ability to search for prices online, but this influence is weak, taking into account that the path coefficient $\beta=0.14$, $p<0.01$. Nevertheless, the hypothesis H_1 is supported by the research findings: the usage of online price information sources is positively related to the ability to search for prices online. These findings are convergent with Dutta & Das (2017): as consumers search through more information sources, as they obtain more benefits in terms of their ability to search.

The ability to search for prices online positively influences ($\beta=0.35$, $p<0.01$) the perceived value of doing online shopping, thus hypothesis H_2 is accepted. The influence is rather moderate, but we may conclude that the more a customer search for prices online, the more value he/she gains in doing online shopping, benefiting from this ability.

Price sensitivity has a positive, quite strong influence ($\beta=0.60$, $p<0.01$) on the online price search effort, hypothesis H_3 being accepted. Hence, the more sensitive a customer is to price, the more interested he/she is in making efforts to search for price information online. Also, price sensitivity accounts for 36% of the variance in online price search effort ($R^2=0.36$).

The effort of online price search has a positive relationship with the perceived value of doing online shopping (β=0.17, p<0.01), thus confirming hypothesis H_4. The more a customer searches online for price information, the more benefits they gain and perceive a higher value of doing online shopping. However, taking into account the value of path coefficient, we may conclude that the effort of online price search has a weak influence on the perceived value of doing online shopping.

The online price search effort has a positive, significant and great influence on the ability to search for prices online (β=0.54, p<0.01), hypothesis H_5 being supported. The more a customer makes a greater effort to search for prices online, the more abilities he/she gain in searching for prices online. The ability to search for prices online has a higher influence on the perceived value of doing online shopping, comparing to the influence of the online price search effort. The coefficient of determination R^2 =0.22 shows that the two variables account for 22% of the variance in perceived value of doing online shopping. These results stress the effects of searching for the online price information process on the perceived value of doing online shopping. The more a person searches for information on price online, the more abilities they acquire that allow them to obtain a better value from shopping online. These findings are consistent with Chih-Chung and Chang (2005) who demonstrated that the past experience in doing online shopping and the ability to use the Internet for shopping have a significant influence on the online shopping behaviour.

The perceived value of doing online shopping positively influences the online buying intentions, this influence being rather strong (β=0.54, p<0.01). Hence the hypothesis H_6 is accepted, meaning that when a customer perceives a better value of doing online shopping, they manifest a higher probability to purchase online. These results are in accordance with the study of Fang et al. (2016) who showed that in the online shopping occasions customers' perceived value is a precursor of repurchase intentions. Considering the coefficient of determination, R^2=0.29, it may be concluded that the perceived value of doing online shopping accounts for 29% of the variation for online buying intentions. It may be concluded that searching for price information in the online environment might lead to the increase of the perceived value of doing online shopping and of the intentions to purchase online.

Conclusions, managerial implications and limitations

As a marketing-mix variable, price has an important role in buying decision-making process, being one type of information customers search for in many shopping occasions. In the online environment, price searching behaviour has different characteristics comparing to traditional stores. Although price search behaviour process benefited from considerable attention in the off-line environment, however this phenomenon was less studied in the online environment. Several studies tried to explain price search behaviour in the electronic markets (Ramos, 2003; Jiang, 2002), without evaluating the influence of search variables on perceived value of online purchasing or on online buying intentions. Hence, the present research took into account some models designed previously, but added some supplementary variables.

The main finding of the present paper is the perceived value of doing online shopping depends primarily on the abilities to search for price information online. When a

person has many sources of information and possesses higher abilities to search for price information online, they perceive a greater value of doing online shopping and they are more inclined to purchase online. Taking into account the conceptual model, these abilities are influenced by customers' sources of information and by the online price search effort. A lower influence on the perceived value of doing online shopping belongs to the online price search effort. Hence, a person who makes a notable effort in searching for prices online perceives a better value for purchasing in this environment. These results are in accordance with Ramos (2003) on the role of perceived ability to online price search behaviour and with Jung et al. (2014) concerning the influence of price information on value perception. The effort in searching for prices online depends on the price sensitivity, thus the more sensitive a person is to price, the more prone he/she is to make an effort to search for prices online.

One of the major implications of the present paper regards the development of pricing and communication strategies by organizations involved in carrying transactions in the electronic markets. The online suppliers could provide various sources of price information (price-comparison sites, reviews systems, blogs, forums) that could lead their target customers to perceive buying online as being more worthwhile. Also, stressing the benefits of searching for price information online may increase the shopping intentions, making this type of transactions more attractive. In this context, the utilization in mobile applications of these findings about online price searching behaviour could have a major implication for retailers, who will thus better succeed in attracting into online shopping context the customers who prefer to buy offline (van Heerde et al., 2019). These findings can be, also, used by retailers in the process of negotiating with online customers, process understood in the sense that Jiang and Ma (2019) analyzed the role of anchors in commercial transactions.

Other managerial implications might be correlated with the impact of Covid 19 pandemic on consumer behaviour. As Sheth (2020) outlined, in recent years online search have impacted dramatically the way consumers do shopping and Covid 19 pandemic determined them to embrace in a higher extend the digital technologies. People also have changed their information behavior (Pan et al., 2020). These factors might determine an improvement of their abilities to search for information in the online environment and the perception of supplementary benefits in doing shopping online. Taking into account these trends, the companies that operate in e-commerce area might increase their competitive advantage by stressing the value online shopping could provide during this crisis and by offering new instruments aimed to facilitate the searching process. Also, many retailers and manufacturers chose to use e-commerce as a new marketing channel aimed to face challenges provided by the home quarantine policy (Wang, et al, 2020). As some habits (e.g. doing online shopping) will continue after the pandemic crisis (Sheth, 2020), it is worthwhile for e-commerce stores to understand the sources of value creation for their clients.

One of the limitations of the current research refers to the latent variables considered by the model. Better results could be achieved if the model would include other variables to explain the effort to search for online prices. Thus, further research could investigate the relationships between the perceived value of doing online shopping and some socio-demographic variables (age, income, education) or behavioural variables (online store image or perceived social risk).

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