



# The effect of consumers' supermarket competence on information search and shopping outcomes in two Balkan cities

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Received: July 20, 2020. Accepted: October 29, 2020

## Abstract

Distribution systems for food can change quickly in emergent markets, requiring new competences for consumers, and even in some European countries we have seen considerable changes in the distribution system for food in recent decades, raising the question whether consumers have acquired corresponding competences. We take two Balkan countries, Albania and Kosovo, as a case in point and measure consumers' competence in dealing with package and price information in supermarkets and how this affects their information search behavior and the outcome of their shopping trips in terms of shopping pleasure, shopping trip satisfaction, and perceived risk. Results from data collected in the two countries' main cities, Pristina and Tirana, show that higher levels of competence lead to more information search and better shopping outcomes, but that information search in certain cases can also increase perceived risk and diminish pleasure and satisfaction. In addition, considerable differences in the two cities can be found, which can be linked to differences in their history.

**Keywords:** Distribution channels, Retailing, Consumer competence, Emerging markets

**JEL codes:** D12, D18, L81

## 1 Introduction

Shopping for food is a necessity. It can be a source of pleasure, and it can be a source of distress. Multiple decisions need to be made, and most of the qualities that consumers desire in food products are experience or credence characteristics that are unknown at the time of purchase (Grunert 2005). Consumers try to reduce this uncertainty by drawing on their own previous experience and on information provided by sellers and, to a lesser extent, third parties. How exactly this information gathering process and the way it leads to decisions looks like depends on the retail environment in which the shopping takes place. In many parts especially of the Western world, supermarkets have been the dominant retail

channel for groceries for the past 60 years. A supermarket environment is characterized by numerous choices and a limited availability of personnel who could provide information to shoppers. Hence, information gathering in supermarkets relies heavily on the product itself as an information carrier, in terms of both its physical appearance and the information that it carries on its label or that is attached to the shelf. In other retail formats, though, notably open markets and specialized shops, information gathering will rest much more on personal communication with the seller. Different retail formats thus require different types of shopper competences—the ability to read, understand, and use label and shelf information in the former case, and the ability to engage in personal communication with the seller in the latter. Online shopping for groceries, which is on the rise in many countries, requires a third set of competences, related to navigating websites and interpreting information in the absence of the possibility to inspect the physical product.

When retail environments change, consumers have therefore to acquire new competences. This has been studied with regard to online shopping, as this channel is relatively new and consumers had to learn how to deal with it (e.g. [Faqih 2013](#); [Hill and Beatty 2011](#)). Competences needed to shop in a supermarket environment have been much less studied, probably because in many countries this has been the dominant form of shopping for groceries for many years, it is regarded as the normal way to shop, and with the exception of the advent of online shopping and a revival of farmers' markets (both of which usually account only for a small share of grocery shopping) the development of retail environments has been relatively slow.

If such changes occur slowly and gradually, consumers probably can adapt relatively easily. However, in emerging markets, the changes occur much more rapidly ([Venkatesan \*et al.\* 2015](#)). In regions such as East Asia and the Pacific, India, and sub-Saharan Africa, channel composition has changed radically in recent years. In China, for example, supermarkets have become a mainstream sales channel for groceries in first- and second-tier cities, and more recently even in the rural areas during the last 20 years ([Reardon, Timmer, and Minten 2012](#)), co-existing with wet markets and, more recently, online channels, and Chinese consumers have witnessed the emergence of these new channels that require them to develop new competences to navigate the novel shopping environments. However, recent changes in the retail environment for groceries can also be observed in parts of Europe. In this paper, we look at supermarket competences and their effect on shopping outcomes in two Balkan cities, one in Albania (Tirana) and one in Kosovo (Pristina), which are also the capital and largest cities (and markets) of the respective countries. Albania had a strict plan economy until the 1990s, and during the transition period afterward the retail scene was still dominated by small shops. It was not before the mid-2000s that supermarket chains emerged in Albania. Kosovo, although geographically close to Albania, has a different history. As part of former Yugoslavia, it had a mixed economy with a combination of state-owned and private enterprises, also in the retailing sector, and consumer acquaintance with supermarkets therefore goes further back in time. While the two countries are culturally similar, they have different histories, including the prevalent economic system, which is expected to affect consumer competence. These two Balkan cities therefore form an interesting context in which to study consumer supermarket competence and how it is related to shopping outcomes, which is the subject of the study to be reported in this paper.

The aim of the present study is thus to measure levels of supermarket competence of consumers in Pristina and Tirana and explore whether these are related to different levels of shopping outcomes, as expressed in terms of perceived risk, shopping trip satisfaction, and shopping pleasure. The paper contributes to the development of the construct supermarket competence and to the literature on determinants of shopping trip satisfaction, shopping pleasure, and perceived risk. The results have implications for retailers, food producers, and public policy. Retailers are interested in consumers experiencing positive shopping outcomes in order to build shopper loyalty. Our results suggest that retailers should try to

adapt their outlets to the development of consumer competences and could also play a role in the development of these competences. Food producers are interested in using the retail outlet as a channel of communication with consumers and can contribute to more effective communication with consumers by designing product information in a way that aligns with consumer competences in using this information. Finally, public policy is interested in promoting food systems that facilitate transactions between consumers and food suppliers, which entails retail environments in which consumers can make informed choices.

## 2 Conceptual development

Competence has been defined as 'an organism's capacity to interact effectively with its environment' (White 1959: 297). This implies that different environments require different competences, and this also holds for different retail environments. Grunert *et al.* (2016) have defined supermarket competence as *the set of skills and knowledge that enable consumers to locate, evaluate, and choose among product offerings in a supermarket, in such a way that consumers' shopping goals are fulfilled*. Consumer competence is thus different from the related construct consumer expertise, which has been defined as *the ability to perform product-related tasks successfully* (Alba and Hutchinson 1987). Competence thus refers to behavior in a specific environment, whereas expertise refers to behavior with regard to a specific set of objects. The term has not been widely used in consumer behavior research, and when it has been used it has been mainly from a consumer policy angle (e.g. Berg 2007; Langrehr 1979) and in the consumer socialization literature (Ward 1974).

Grunert *et al.* (2016) proposed that the construct has three dimensions. The first two dimensions are related to evaluating and choosing products, distinguishing between the evaluation of quality and the evaluation of price. Competence in evaluating quality implies the ability to apply existing knowledge on finding and making sense of quality-related product information, mostly found on the product label, but possibly also on posters, displays, and other forms of in-store information. As food products are mostly characterized by experience and credence qualities, quality has to be inferred from quality cues, mainly the product's appearance and the information available, the use of which in turn relies on linking these cues to the consumer's pre-existing knowledge. The first dimension therefore covers the consumer's ability to read, understand, and use package information to infer the quality of products in a supermarket. Competence in evaluating price implies the ability to use previous knowledge on reference prices and on sales and promotion practices to read and evaluate the price information that is available in supermarkets (Jensen and Grunert 2014). Thus, the second dimension covers consumers' ability to interpret and use price and promotion information. Grunert *et al.* (2016) also define a third dimension, related to locating product offerings in the supermarket. Our interest here is how consumers are able to search and use information available in the supermarket to make decisions when choosing between products. We are not interested in their learning of store layouts and other factors that may aid them in finding products, and therefore we will not deal with this dimension in the analysis.

We expect supermarket competence to have an effect on three outcome variables: perceived risk, shopping trip satisfaction, and shopping pleasure. We select these three outcome variables because they are proximal to the fulfilment of the consumer's shopping goals, independent of what these shopping goals are.

*Perceived risk*, viewed as the perceived likelihood of a negative outcome of a decision, has been a prominent concept in consumer research for more than 50 years [see Conchar *et al.* (2004) for a more recent review, and Mitchel (1999) and Dowling (1986) for earlier treatments]. A wealth of studies has investigated its dimensionality (commonly financial, performance, physical, psychological, and social risks), the way it is affected by personal and situational determinants, and the way it influences activities aimed at risk reduction.

Food is partly an experience, partly a credence good (Grunert 2005), because its quality is unknown before purchase and must be inferred from quality cues. In a supermarket setting, as compared to an open market, many quality cues are no longer available. The physical product may be visible, but it tends to be prepackaged, which reduces consumers' access for visual inspection and handling. Information search, and especially the processing of information on the food label, hence becomes a major activity for risk reducing activities, and the ability to engage in these activities and actually reduce perceived risk is expected to be related to levels of supermarket competence. The financial aspect of risk—basically the risk of paying too much for a product—is likewise related to information-seeking activities, here the ability to process price information based on previous knowledge on pricing practices and on internally stored reference prices. Thus, we expect

H1: Higher levels of supermarket competence lead to lower levels of perceived risk.

Shoppers likely have different goals when they enter a supermarket (Bell, Corsten, and Know 2011), but no matter whether they seek to take advantage of a specific promotion or just need to fill up on daily needs, higher levels of supermarket competence should facilitate goal attainment and increase *shopping trip satisfaction*. A host of factors affecting shopping trip satisfaction have been analyzed in the literature [see Esbjerg *et al.* (2012) for an integrative framework], including both factors related to the store environment and factors related to the shoppers and especially his/her goals. Here, we argue that higher levels of supermarket competence will increase the efficacy by which the consumer can use the shopping environment to attain his/her goals, so that

H2: Higher levels of supermarket competence lead to higher levels of shopping trip satisfaction.

In the consumer behavior literature, satisfaction is sometimes viewed as having both a cognitive and an affective component (e.g. Oliver 1993), whereas in the literature on subjective well-being satisfaction is regarded as a cognitive evaluation of something and different from the affective reaction to it (Diener, Lucas, and Oishi 2002). We follow the latter reasoning here and deal with the affective reaction to the shopping experience as different from satisfaction. In the retailing literature, affective reactions to retailing experiences have often been analyzed using Mehrabian and Russel's (1974) environmental psychology paradigm, where affective reaction is analyzed in the three dimensions: pleasure, arousal, and dominance, with pleasure usually being the dimension most closely related to approach and avoidance behavior in a retailing context (Donovan and Rossiter 1982). As noted above, higher levels of supermarket competence mean better ways of using a retailing environment to attain one's goals. From a cognitive appraisal perspective, we should therefore expect that higher levels of supermarket competence lead to an appraisal of the supermarket environment as goal-aligned, which in turn results in a higher degree of felt pleasure. Hence,

H3: Higher levels of supermarket competence lead to higher levels of shopping pleasure.

When supermarket competence reduces perceived risk with a purchase, it must be because it facilitates the process of finding products that are regarded as less likely to be risky. This can be based on recognition of a product previously bought, on the use of brands, or on information search. Information search is commonly regarded as a main element of the consumer decision-making process, and numerous studies have been conducted over the years (for overviews, see Beatty and Smith 1987; Guo 2001). Inspired by economic theory, a major line of reasoning has been that the extent of consumer search is determined by the costs and benefits of the information search (Moorthy, Ratchford, and Talukdar 1997). A higher level of supermarket competency is expected to reduce the cost of information search, because it facilitates finding and processing the information, and also the benefits of the information search, because it facilitates concentrating information search on the most

relevant information. We therefore expect that information search partly mediates the effect of supermarket competence on perceived risk and on shopping trip satisfaction.

In information search for food products, we can distinguish between search for price information and search for quality information. As the quality of food products is mostly unknown at the time of purchase, as discussed earlier, search for quality information entails mostly search for quality cues. Two types of quality cues stand out as especially important: ingredient information and origin information. Ingredient information may be sought because of the desire to select healthy and nutritious products, avoiding, for example, high amounts of saturated fats and/or sugar and seeking out products with a high content of minerals and vitamins, and it may be sought because of a desire for natural products, trying to avoid additives and other ingredients regarded as artificial (Evans, Challemaison, and Cox 2010; Shim *et al.* 2011). The latter has recently become prominent in the form of consumer interest for 'clean labels' (Asioli *et al.* 2017). The uptake of ingredient information has earlier been linked to consumer expertise (Grunert, Bolton, and Raats 2012; Dörnyei and Gyulavári 2016), although the link has not been empirically studied. Origin information is one of the most widely researched food label information and has been found to have effects on consumer preferences, purchase intentions, and purchase behavior (Newman *et al.* 2014). Origin information can be used as a quality cue, but can also affect consumer preferences directly (Van der Lans *et al.* 2001). Its role has earlier been confirmed specifically for cheese in Kosovo (Haas *et al.* 2016; Hysen *et al.* 2008). We therefore hypothesize that information search can reduce risk with the purchase, but we likewise expect that successful information search can also positively affect shopping trip satisfaction and even shopping pleasure. Thus,

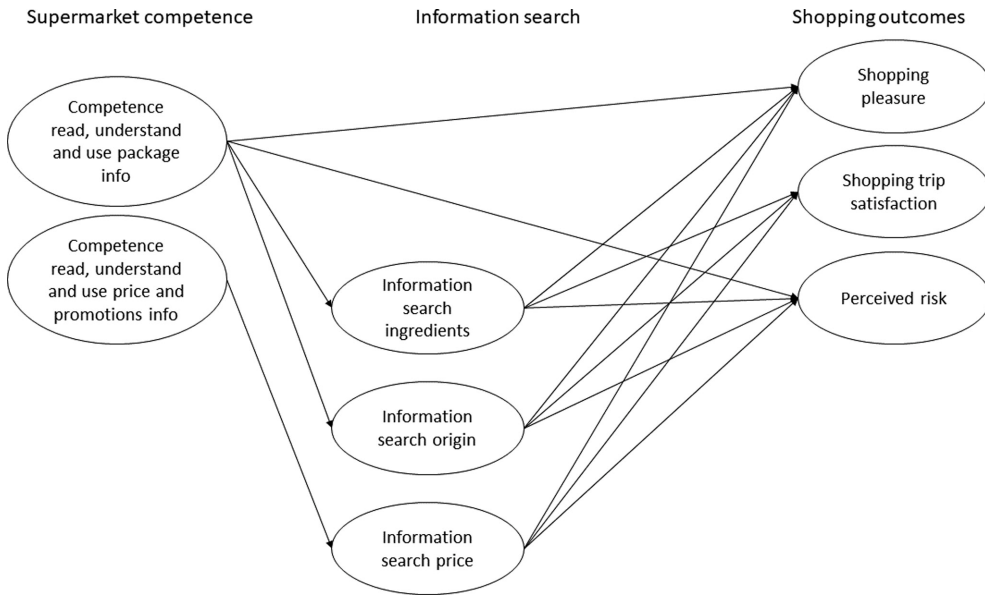
H4: The effect of supermarket competence on perceived risk, shopping trip satisfaction, and shopping pleasure is partly mediated by information search on price, food ingredients, and food origin.

This completes the conceptual development and derivation of hypotheses. Our overall conceptual model can be seen in Fig. 1.

### 3. Retail environment and consumer behavior in Pristina and Tirana

Supermarket chains have been expanding in both Albania and Kosovo; however, traditional outlets still play an important role for fresh fruits and vegetables, meat, and dairy products. In Albania, supermarket chains have been introduced later—while Kosovo (as the rest of Yugoslavia) had a mixed economy (combining state-owned companies with private enterprises also in the retailing sector), Albania had a strictly planned economy. Also, during early transition, the retail trade in Albania has been dominated by small shops, and only during the mid-2000s did supermarket chains emerge (Gerdoci, Skreli, and Imami 2015). Another difference in terms of supermarket chains between both countries is ownership—while in Albania the two largest supermarket chains are international (Spar and Conad), in Kosovo the largest ones are locally owned.

Consumer behavior in both countries is characterized by the fact that both Albania and Kosovo face serious problems with their national food safety control systems. The problems related to food safety, including animal diseases (e.g. brucellosis), and their perception by consumers for dairy products have been identified by several studies (Gjeci, Bicoku, and Imami 2016; Haas *et al.* 2016; Sopi *et al.* 2015; Zhllima, Imami, and Canavari 2015). This situation is caused by weak law enforcement and low farmer awareness about animal diseases and food safety standards (Gjeci, Bicoku, and Imami 2016; Zegiri *et al.* 2015) and still persists in spite of improved control measures (Hamidi *et al.* 2016). As a result, food safety has been becoming a factor of increasing importance for consumers (Pllana *et al.* 2012).



**Figure 1.** Conceptual framework.

As food safety is a credence attribute, use of cues for inferring safety (and other aspects of quality) is linked to trust in the source of the information. In developed countries with consolidated institutions, consumers may trust public institutions and/or supermarket chains to guarantee food safety. In the case of countries with a weak institutional framework, such as Albania and Kosovo, the level of trust in public institutions to guarantee food safety may be lower. *Imami et al. (2011)* have found that consumers in Albania trust more in the retailer than in institutions for guaranteeing food safety, and that when possible, consumers prefer to buy food directly from producers as a strategy to ensure safety and quality (*Imami et al. 2013*). Origin (domestic and local origin) and brand reputation are important attributes to guarantee food safety for Albanian and Kosovo consumers (*Haas et al. 2016, 2019*). Previous research has shown that Kosovars perceive domestic dairy products as significantly better than Albanians do when compared with imported food products, while Albanian consumers use food safety- and quality-related information about cheese and milk more frequently (*Haas et al. 2019*).

#### 4. Methodology

A survey based on face-to-face interviewing was carried out with consumers from Tirana and Pristina in spring 2019 after pretesting the instrument in both cities. The interviews were carried out by experienced graduate students who were trained and supervised by the authors of this paper. After receiving training and instructions, the selected students tested the questionnaire, and after receiving the feedback, the questionnaire was further fine-tuned while interviewers received further instructions and clarifications related to the survey implementation. Two of the authors of this paper monitored the survey implementation on regular basis.

The interviews were carried out at supermarkets and green markets, where people were approached randomly. After completing each face-to-face interview, interviewers would approach the next closest buyer who walked by. In total, 642 valid questionnaires were

**Table 1.** Demographic characteristics of samples.

Variable		Pristina (per cent)	Tirana (per cent)
Gender	Female	58	65
	Male	42	35
Education	4 years	0	2
	8–9 years	24	8
	12 years	30	35
	University	46	55
Age	18–30	27	29
	31–45	31	28
	46–60	31	25
	61 plus	11	18
Monthly household income after tax	€150–250	2	15
	€251–500	13	28
	€501–800	32	42
	€801–1,200	35	12
	€1,201–1,500	13	2
	€1,501–2,000	3	1
	Over €2,000	2	0
<i>N</i>		299	343

collected from the interviews in Pristina (299 interviews) and Tirana (343 interviews). Response rate was over 90 per cent in both countries.

In order to ensure good data quality, several criteria were set and series of steps were followed in establishing and assessing reliability and validity of measures. Each completed questionnaire was checked for completeness, where essential questions had to be filled in for a questionnaire to be considered complete. After the review of questionnaires for completeness, 48 out of 642 were removed from the dataset. Moreover, the completed questionnaires were checked for consistency.

Demographic characteristics of the two samples can be seen in Table 1. In both cities, there is a slight dominance of female respondents and a high percentage of respondents with a university education. Monthly household income appears to be higher in Pristina than in Tirana.

The questionnaire contained measures for the constructs in the conceptual model and for demographic characteristics of the respondents.

While supermarket competence is an enduring trait expected to develop slowly and hence be stable across shopping trips in the short run, the outcome variables need to be measured with relation to a specific shopping experience. Therefore, shopping trip satisfaction, shopping pleasure, and perceived risk were measured with regard to the latest experience in shopping for a particular product category. We needed to find a product category that is widely purchased, and that can be purchased both in ways that are typical for open markets, i.e. sold in loose weight and unpacked, and in ways typical for supermarkets, i.e. pre-packed with a food label and branded. The product category chosen was traditional cheese (a feta-like fresh cheese), the production of which plays an important dietary and economic role in both countries. Only buyers who did buy cheese on the shopping trip were therefore approached to be interviewed.

This product category was chosen because cheese is one of the main food items of the local households' consumer basket, predominantly produced locally, since imports are low. While cheese sold in supermarket chains is usually sourced from agroindustry, it is commonly found that cheese produced informally by farmers or small informal processors is sold in small neighborhood shops or fresh food markets, often not meeting basic food safety standards (Haas *et al.* 2019). On the other hand, in both countries there have

emerged several processors that have a strong presence both in supermarket chains and in neighborhood shops. The livestock and dairy sectors are the most important agro-food sectors in Albania and Kosovo, representing about half of the output value of agriculture. The potential of the domestic markets offers great opportunities for the further development of the dairy industry. The good relations with Albania and the abundance of grass and wasteland pave the way to expand the dairy markets in both countries.

Supermarket literacy was measured by six items from the instrument developed by [Grunert \*et al.\* \(2016\)](#), with three items each for the two dimensions: 'read, understand, and use package information' and 'read, understand, and use price and promotion information'. All items had to be answered on a seven-point scale, where 1 = strongly disagree and 7 = strongly agree. The three subscales had good reliability in both subsamples [Cronbach's alpha (CA) 0.83, 0.77, and 0.89 in Pristina, and 0.70, 0.89, and 0.83 in Tirana].

Information search for quality cues was measured by seven items developed by the authors. Four items measured information search for ingredients (presence of vitamins, minerals, fibers, etc./energy values/list of ingredients/fat in milk and dairy products). Three items measured information search for origin (country in which the food has been produced/region in which the food has been produced/name of the grower or manufacturer). Respondents were asked 'How often do you check information about ...' and had to answer on a scale 1 = never, 2 = occasionally (about one to two times per week), 3 = frequently (about three to four times every week), 4 = often (about 5 times per week), and 5 = always (daily). The two subscales had good reliability in both subsamples (CA 0.81 and 0.95 in Pristina, and 0.82 and 0.92 in Tirana).

Information search for price was measured by four items from [Lichtenstein, Ridgway, and Netemeyer \(1993\)](#).

Perceived purchase risk was measured by six items adapted from [Stone and Grønhaug \(1993\)](#), also rated on seven-point 'strongly disagree–strongly agree' scales, measuring risk perceived after the most recent purchase of cheese in terms of safety, taste, quality, healthiness, trustworthiness, and price. The item concerning price risk did not correlate with the rest and was removed; the other items showed good reliability in both subsamples (CA 0.76 in Pristina and 0.80 in Tirana).

Shopping trip satisfaction was measured by four items from [Eroglu and Machleit \(1990\)](#), which respondents rated on seven-point bipolar scales. The items showed good reliability in both subsamples (CA 0.97 in Pristina and 0.91 in Tirana).

Shopping pleasure was measured by six bipolar items taken from [Donovan and Rossiter \(1982\)](#). The items showed good reliability in both subsamples (CA 0.96 in Pristina and 0.92 in Tirana).

All items can be seen in [Table 3](#).

For descriptive analysis, mean scores across items were computed for all constructs. Estimation of the relationships between constructs as shown in [Fig. 1](#) was done using the partial least squares method with the SmartPLS software ([Ringle, Wende, and Becker 2015](#)).

## 5 Results

Means for the main constructs in the two subsamples can be seen in [Table 2](#) (based on mean scores of the items reflecting the construct). The means differ significantly between the two subsamples with regard to all constructs except for the competence on price and promotions. Pristina respondents have higher competence in reading, understanding, and using information on the package. Tirana respondents look more frequently at information on ingredients, whereas Pristina respondents look more frequently at information on origin. Pristina respondents also have a stronger tendency to look for price information, which could be due to a higher share of respondents with lower income levels from Pristina (see [Table 1](#)). Tirana respondents perceive significantly more risk and experience significantly



**Table 2.** Means of constructs in the two cities.

Variable	Mean (standard deviation)		P
	Pristina	Tirana	
Supermarket competence: read, understand, and use package information	4.72 (1.85)	4.38 (1.80)	0.019
Supermarket competence: read, understand, and use price and promotion information	4.97 (1.89)	5.10 (1.52)	0.339
Information search: ingredients	2.29 (1.13)	2.90 (1.14)	0.000
Information search: origin	3.60 (1.23)	3.22 (1.27)	0.000
Information search: price	4.07 (0.84)	3.73 (0.83)	0.000
Perceived risk	2.05 (1.15)	4.34 (1.62)	0.000
Shopping trip satisfaction	5.80 (1.04)	3.82 (1.12)	0.000
Pleasure	6.10 (1.09)	4.50 (1.29)	0.000
N	300	349	

Supermarket competence measured in seven-point scale with higher values corresponding to more competence. Information search measured on five-point scale with higher values corresponding to more search. Perceived risk measured on seven-point scale with higher values corresponding to more perceived risk. Shopping trip satisfaction measured on seven-point scale with higher values corresponding to more satisfaction. Pleasure measured on seven-point scale with higher values corresponding to more pleasure. *P*-values based on ANOVA, *F*-test.

less shopping pleasure and less satisfaction with the shopping trip compared to Pristina respondents.

Tables 3 and 4 show the results of the structural equation analysis in PLS. The measurement model was used to evaluate the construct measures' reliability and validity. The indicator loadings in Table 3 indicate good indicator reliability, as all loadings were larger than 0.7 (Hair *et al.* 2017). Inspection of CA, composite reliability (CR), and the average variance extracted (AVE) showed that the values for the latent constructs were adequate and greater than the thresholds of CA > 0.7, CR > 0.7, and AVE > 0.5 (Hair *et al.* 2017), thus meeting the recommended requirements. Discriminant validity of the latent constructs was examined by inspecting the heterotrait–monotrait (HTMT) matrix (Hair *et al.* 2017; Henseler, Ringle, and Sarstedt 2015). Results show that all values of HTMT were below the critical value of 0.85 and therefore indicate discriminant validity.

The structural model in Table 4 shows that the 'read, understand, and use package information' dimension of supermarket competence increases information search for both origin and ingredient information, decreases perceived risk, and increases shopping pleasure, which is according to the expectations. There is no direct significant effect on shopping trip satisfaction, suggesting that a possible effect is mediated by information search. More frequent information search about origin decreases perceived risk and increases shopping trip satisfaction and shopping pleasure, which is according to expectations. However, contrary to expectations, more frequent information search about the ingredients of the product led to more perceived risk and less shopping trip satisfaction and less shopping pleasure. In spite of these opposite effects of the two types of information, the total effect of the 'read, understand, and use package information' dimension on the outcome variables is positive, reducing risk and increasing shopping trip satisfaction and shopping pleasure. In order to check whether the negative relationship between information search for ingredients and the outcome variables is due to individual differences, latent class analyses were carried out with the two information search variables as independent variables and the three outcome variables as dependent variables. Results showed that while the strength of the effect varied, the effects were negative across a range of latent class solutions for all groupings of respondents.

**Table 3.** Results of PLS analysis—measurement model.

Measurement model		Coefficient	Standard error
Supermarket competence: read, understand, and use package information	I can use package information to identify the product quality	0.88	0.02
	I can use package information to compare different products	0.89	0.01
	I have no problems understanding the information that is printed on food packages	0.71	0.03
Supermarket competence: read, understand, and use price and promotion information	I have no trouble understanding when products are on promotion in the supermarket	0.86	0.02
	I can tell whether the products are worth the price or not based on the information of quality and production date for those products on sale	0.88	0.02
	I can tell whether the products are really on sale or not based on my shopping experience	0.93	0.01
Information search: ingredients	Presence of artificial additives	0.92	0.01
	Presence of vitamins, minerals, fibers, etc.	0.096	0.01
	Energy values	0.94	0.01
Information search: origin	The list of ingredients	0.85	0.02
	In which country a foodstuff has been produced	0.89	0.01
	In which region within Kosovo (Albania, Serbia) the foodstuff has been produced (for domestic products)	0.84	0.02
Information search: price	The name of the grower/manufacturer	0.81	0.02
	When I am in a shop, I will always check prices on alternatives before I buy	0.81	0.02
	When I buy or shop, I really look for special offers	0.69	0.04
	I usually watch ads for announcements of sales	0.73	0.04
Perceived risk	In a store, I check the prices, even when I am buying inexpensive items	0.83	0.03
	The cheese I have bought today is not safe	0.90	0.01
	The cheese I have bought today will have a bad taste	0.81	0.02
	The cheese I have bought today is of bad quality	0.87	0.01
	The cheese I have bought today is not healthy	0.93	0.01
Shopping trip satisfaction	The cheese I have bought today is not trustworthy	0.92	0.01
	How satisfied are you with your shopping trip today?	0.94	0.01
	How pleased were you with this shopping trip?	0.95	0.01
	How much did you like this shopping trip?	0.95	0.01
Pleasure	How pleasant was this shopping trip?	0.94	0.01
	Unhappy–happy	0.93	0.01
	Unsatisfied–satisfied	0.94	0.01
	Annoyed–pleased	0.92	0.01
	Bored–relaxed	0.92	0.01
	Restricted–free	0.85	0.02
	Despairing–hopeful	0.89	0.01

**Table 4.** Results of PLS analysis—structural model.

Structural model		Coefficient	Standard error
<i>Supermarket competence: read, understand, and use price and promotion information</i>			
Direct effects	Perceived risk	ns	
	Shopping trip satisfaction	ns	
	Shopping pleasure	ns	
Indirect effects	Information search: prices	0.25	0.04
	Information search: prices → perceived risk	-0.04	0.01
	Information search: prices → shopping trip satisfaction	0.04	0.01
Total effects	Information search: prices → shopping pleasure	0.04	0.01
	Perceived risk	-0.17	0.04
	Shopping trip satisfaction	0.04	0.01
	Shopping pleasure	0.04	0.01
<i>Supermarket competence: read, understand, and use package information</i>			
Direct effects	Information search: ingredients	0.32	0.04
	Information search: origin	0.41	0.03
	Perceived risk	-0.20	0.04
Indirect effects	Shopping trip satisfaction	ns	
	Shopping pleasure	0.17	0.04
	Information search: ingredients → perceived risk	0.10	0.02
	Information search: ingredients → shopping trip satisfaction	-0.05	0.01
	Information search: ingredients → shopping pleasure	-0.08	0.02
	Information search: origin → perceived risk	-0.11	0.02
	Information search: origin → shopping trip satisfaction	0.10	0.02
Total effects	Information search: origin → shopping pleasure	0.05	0.02
	Perceived risk	-0.21	0.04
	Shopping trip satisfaction	0.05	0.02
	Shopping pleasure	0.15	0.04
<i>Information search: ingredients</i>			
Direct effects	Perceived risk	0.31	0.04
	Shopping trip satisfaction	-0.16	0.04
	Shopping pleasure	-0.25	0.04
<i>Information search: origin</i>			
Direct effects	Perceived risk	-0.26	0.04
	Shopping trip satisfaction	0.24	0.04
	Shopping pleasure	0.13	0.04
<i>Information search: prices</i>			
Direct effects	Perceived risk	-0.17	0.04
	Shopping trip satisfaction	0.16	0.05
	Shopping pleasure	0.15	0.04

All coefficients significant at  $P < 0.01$  ( $t$ -test); ns = not significant.

The 'read, understand, and use price and promotion information' dimension of supermarket competence led to increased price information search, but has no direct effect on the three outcome variables, suggesting that any such effects are mediated by information search. More price information search decreases perceived risk and increases shopping trip satisfaction and shopping pleasure.

## 6 Discussion and conclusions

Changes in the distribution system of agricultural products require adaptations in consumer competences. We investigated consumer shopping behavior in two Balkan cities, Pristina and Tirana, both of which have seen changes in the dominant form of distribution, moving from state-controlled outlets and open markets to supermarkets. We measured supermarket competence of consumers in both cities and looked at how different levels of supermarket competence are related to shopping outcomes when buying cheese, namely perceived risk associated with the purchase, satisfaction with the shopping trip, and shopping pleasure. Cheese was selected as a model product category as it is sold both in loose weight on open markets and pre-packed and branded in supermarkets, and therefore exemplifies the different competence requirements when shopping in different types of channels.

The results shed light especially on the role of information search in the shopping process. Supermarkets, with their multitude of products and absence of human personnel to ask for advice, require competences in reading, understanding, and using information, both information available on the food label and information about price. We found that higher levels of these competences indeed imply less perceived risk, higher levels of shopping trip satisfaction, and higher levels of shopping pleasure. There are, however, different mechanisms at work.

Regarding competence in reading, understanding, and using information on price and promotions, the effect on the three shopping outcome variables is completely mediated by information search. In other words, the competence itself only has a positive effect on shopping outcomes to the extent it leads to increased search for price information. This may be related to the volatility of retail prices, which is higher than that in comparable outlets in Western countries, where retail chains to a higher degree rely on contracted suppliers, which tends to flatten prices. For consumers, this means that there is a need to update price information during each shopping trip (Jensen and Grunert 2014).

Competence in reading, understanding, and using quality-related information on the package, on the other hand, has a direct effect on perceived risk and shopping pleasure. The self-perception of being able to make use of the information available on the package in supermarkets is related to perceived risk and shopping pleasure independently of the level of information search actually taking place. Similar effects have been observed regarding the role of internet self-efficacy when shopping online (e.g. Faqih 2013).

Apart from this direct effect, we did find that higher levels of competence lead to more information search on quality cues. However, the information-seeking process seems to have an ambivalent role in the shopping process. While information search for origin of the products indeed is related to lower perceived risk, the opposite is true for seeking information about product ingredients. Origin information thus seems to be a true risk reliever, which is in line with much of the stream of research on the role of origin information in consumer choice [see Salnikova and Grunert (2020) for a recent example on emerging markets]. Searching for ingredient information, on the other hand, goes hand in hand with a higher level of perceived risk, which could indicate that the search for ingredient information is the outcome of feelings of riskiness, but that such information is in fact not able to reduce that risk. Some of this may be product-specific to cheese, where nutritional information generally does not indicate high levels of healthiness, whereas information about additives and chemicals may generally be viewed as an indicator of a risky product generally for food, a finding that has been made in other contexts (Evans, Challemaison, and Cox 2010; Shim *et al.* 2011).

In comparing results from the two cities, the differences in the average levels of the shopping outcome variables are striking. Tirana consumers experience clearly less satisfaction and pleasure and clearly more risk with the purchase compared to their Pristina counterparts. In the light of the discussion above, part of this can be attributed to the higher level of competence in reading, understanding, and using package information in the Pristina

sample, and the finding that Tirana consumers engage in searching for origin information less often and engage in searching for ingredient information more often. It is known that country of origin has an impact on perception of food safeness and its freshness. Due to the lack of confidence in the food safety control system, Kosovo consumers use food safety- and quality-related information less frequently than Albanian consumers. Moreover, Kosovo consumers are less aware and knowledgeable about the labels of cheese and milk; hence, country of origin is used more frequently as cue for quality product evaluation. Indeed, it has earlier been argued that the role of origin as a risk reliever is especially high in Pristina (Miftari 2009).

For food manufacturers, the results clearly underline the importance of origin information. At the same time, they underline the ambivalent nature of ingredient information. Ingredient information is mandatory, but is also used as a marketing tool in the form of nutrition claims, health claims, or clean label claims. It has earlier been shown that such information can backfire when it primes a notion of lack of naturalness (Lähteenmäki *et al.* 2010) and the finding generally underlines the importance of an in-detail understanding of the way in which consumers view specific ingredients (Aschemann-Witzel, Varela, and Peschel 2019).

Retailers have an interest in that their customers leave the store with a positive shopping experience. Our study shows that the extent to which this happens is related to the level of competence with which customers enter the store. It is difficult for retailers to tailor their stores to different levels of supermarket competence, but retailers could engage in activities that help consumers building those competences. Price information is largely under the control of retailers and increased transparency of price information can increase consumer competence. Quality information is mostly under the control of the manufacturer, but retailers can complement the package information with shelf displays and other forms of supportive information.

The major limitation of this study, apart from the convenience nature of the samples, is the fact that the measures are all based on self-reports. The measured competence is the way consumers self-perceive their competence, which may deviate from their actual ability to understand and use certain types of information. Also, their level of information search is measured as self-reported behavior, which is known to inflate the level of measured information search activity. While this is not necessarily a problem when looking at the way in which levels of information search covary with other constructs, it does underline the need for experimental research in this area. Finally, the outcome variables were measured with regard to one specific product category, cheese, which is a frequently purchased item. Consumers may find it more difficult applying their competences toward satisfactory outcomes when buying something with a lower purchase frequency.

## Funding

This paper was based on a project supported by the Higher Education, Research and Applied Science (HERAS) project, funded by the Austrian Development Agency (ADA) with funds of Austrian Development Cooperation and co-financed by the Ministry of Education, Science and Technology of Republic of Kosovo (MEST).

## Data availability

The data for this study are available subject to agreement with the authors.

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