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Research Article

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The Importance of Intrinsic and Extrinsic Local Olive Oil Attributes for Tourists: Evidence from a Mediterranean Destination

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Abstract: This paper focuses on tourists' local olive oil purchasing behaviour in a tourist destination, providing evidence of consumer segments based on the importance of olive oil attributes for purchasing decisions. The research was conducted in Croatia, a famous tourist destination in the Mediterranean, recognised for its traditional food products, including olive oil. A survey conducted on 471 tourists shows that the main predictors of a tourist's purchase of olive oil are the number of previous visits to the destination and the tourist's country of origin. The relative importance of extrinsic and intrinsic olive oil attributes differed between tourists, and the present research identifies four market segments. The results of this study may help olive oil producers develop and implement more successful marketing strategies directed towards tourists in the destination.

Keywords: Tourists, Mediterranean destination, local olive oil, product attributes, segmentation

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1 Introduction

Locally produced products play an important role in tourist destinations. Local products in connection to the local territory make an authentic tourist product which fulfils the wishes of buyers/tourists for typical, traditional, or indigenous products produced in the destination (Littrell et al., 1993; Asplet and Cooper, 2000; Tosun et al., 2007). In tourism studies, the consumption of food during the summer season is increasingly seen as a strategic element in the marketing of a destination, since local quality products add to the travel experience (Cianflone and Cardile, 2014). Local products are also an added value to rural areas, connecting producers, tourists, providers, and visitors and supporting the economic growth and environmental sustainability of the region (Sims, 2009).

The impact of tourist consumption of local products can generate direct, indirect, and induced effects, to the benefit of the local economy (Tellstrom et al., 2005). Also, there is evidence indicating that inbound tourism is likely to influence the exports of local products (Gil-Alana and Fischer, 2010; Kavallari et al., 2011). Destinations with a high number of foreign tourist visits thus have the opportunity to promote their local products to a vast number of visitors, almost at their doorstep, without additional marketing costs.

The Mediterranean area, where land and sea environments meet, presents a unique combination of resources that have enabled Mediterranean destinations to offer various hospitality and tourism services and products and attract a growing number of international vacationers (mainly Europeans) to visit (Assaker and Hallak, 2012). The World Travel Organization indicates that 84% of tourists who visit the Mediterranean region come from northern and western Europe (UNWTO, 2008). Following EUROSTAT, in 2017 Adriatic Croatia, with 81.9 million nights spent in tourist accommodation, was the third most popular tourist region in the EU, after the Canarias (104 million nights) and Cataluña (83 million nights).

Mediterranean destinations are currently characterised by high numbers of repeat visitors (Butler, 1980; Oppermann, 1998; Assaker and Hallak, 2012), suggesting that tourists return to these destinations due to their satisfaction with their previous travel experience (Assaker and Hallak, 2012). It is found that the repeat vacation market could be more profitably served than the market of new buyers (Gyte and Phelps, 1989). Additionally, Meis et al. (1995), in their study of US tourists to Canada, concluded that repeaters spent more throughout their entire travel lifecycles compared to those who do not return to previous destinations. Lehto et al. (2004) concluded in their study that during repeat vacations, travelers' interests become more focused on specific types of activities and places, and activity participation becomes the most engaging. This claim may correspond to repeat visitors' greater focus on specific, regionally bound shopping activities, such as the purchase of local olive oil.

European Mediterranean countries are well known for their food products, especially as the leading producers of olive oil in the world, accounting for around two-thirds of world production. (See Market situation in the olive oil and table olives sectors, European Commission, for the period 2014/15 to 2019/20.) Croatia has a total of 18,683 hectares (ha) of olive trees (Croatian Bureau of Statistics, 2018) yielding 5,000 tonnes of olive oil (International Olive Oil Council, 2017). This data ranks Croatia sixth among Europe's top olive oil producing countries (behind Spain, Greece, Italy, Portugal, and Cyprus). The northern part of the Croatian Adriatic coast is characterised by the specific pedoclimatic effect of the northern Mediterranean impact on olive trees, which results in high-quality and distinct olive oils, rich in unsaturated fatty acids (Benčić, 2000; Aparicio et al., 1994). This is one reason that Flos Olei, a guide to the world of extra virgin olive oil, declared the Croatian region of Istria one of the best olive oil regions in the world (Oreggia, 2019).

The connection between the Mediterranean region and olives is very long, dating from the early Bronze Age: evidence indicates the presence of olive plants along the eastern Mediterranean Coast dating back to this period (Vossen, 2007). Olive oil is a fundamental element of the "Mediterranean diet" (Erraach et al., 2014). Moreover, it is a healthy product which can prevent some cardiovascular diseases. Medical research has confirmed that regular consumption of olive oil contributes to lowering blood cholesterol, reducing the risk of certain kinds of cancer, and helping in calcium absorption (Owen et al., 2000; Sofi et al., 2008; Tuck and Hayball, 2002). The extensive dissemination of these findings supported by mass media has been a decisive help in creating an excellent image of olive oil as a healthy food product (Santosa et al., 2013; Xiong et al., 2014).

For sustainable destination management of the Mediterranean area, it is indispensable to take into account the connection between olive oil production and tourism, known as olive oil tourism or oleo tourism (Alonso and Northcote, 2010; Ruiz Guerra et al., 2011; Valentín et al., 2011; Murgado, 2013; Campón-Cerro et al., 2014; Vázquez de la Torre et al., 2017). Yet there are only a few studies on tourist habits in olive oil purchasing during vacations in a Mediterranean destination. In one of these studies, conducted by Sabbatini et al. (2016), the researchers explored the olive oil preferences of tourists during their visit to the island of Crete. In another context, Pineda et al. (2018) analysed foreign tourists' behaviour and preferences at a destination to explore the foreign market potential for olive oil from local producers.

For this research, we aimed to explore the behaviour of tourists towards local olive oils during their visits to Croatia. The specific objectives of the study are:

a) Estimate a share of tourists purchasing local olive oil during their holiday in Croatia.

b) Explore differences between buyers and non-buyers of local olive oil regarding their socio-demographic characteristics and travel behaviour.

c) Examine the importance of extrinsic and intrinsic attributes of local olive oil for buyers (tourists) during their holiday in Croatia.

d) Identify tourist segments according to the importance they attach to attributes of local olive oil.

2 Theoretical Framework

Tourists are showing an increasing desire to purchase and bring home local products when visiting a destination (Ho et al., 2020). A similar impulse occurs with food products typical of a visited destination, because tourists perceive local food as a direct connection to the culture of the visited place (Chen and Huang, 2018).

Olive oil is a fascinating Mediterranean agricultural product. Nevertheless, it is rarely researched in tourism contexts in the scientific literature. Sabbatini et al. (2016) explored tourists' interest in local olive oil. They concluded that the decisions on purchasing olive oil during tourists' holidays in Create are affected by tourists' length

of stay (tourists who stay longer are more likely to buy olive oil) and family income (the higher income positively influences the decision of purchasing). Also, tourists who buy other traditional food products and tourists who visit the destination for gastronomic reasons are more likely to buy olive oil. Based on their research, the typical profile of a tourist who buys olive oil is characterised by provenance from Scandinavian countries (countries not producing olive oil), aged 45 and more, with a high income.

Pineda et al. (2018) analysed tourists as olive oil consumers from another point of view. They researched the preferences and behaviour of tourists in Sevilla, Spain, and found differences in the taste preferences for olive oil based on the tourist's provenance, with tourists from Spain, Italy, and Portugal preferring more intense and spicy olive oils, and tourists from elsewhere preferring sweeter and milder olive oils.

Following Lancaster's theory (1966), products can be seen as a bundle of attributes with different levels of each attribute, and the consumer's choice is determined by a preference for specific product profile components. Thus, research on the importance of product attributes is fundamental for modelling the supply of the product. Product attributes refer to the various characteristics of a product that influence a customer's decision to purchase or not to purchase the product (Turner and Reisinger, 2001; Swanson and Horridge, 2004). Eroglu and Machleit (1989), cited by Guerrero et al. (2012), describe attributes as evaluation criteria that consumers use to categorise different offerings and thus facilitate the development of purchasing decision processes.

Product attributes are classified as intrinsic or extrinsic, depending on their relationship with the product. Intrinsic cues involve the physical composition of the product and permit an objective measurement of quality (Cerjak et al., 2016). Intrinsic attributes cannot be changed without altering the nature of the product itself, and they are consumed as the product is consumed (composition, flavour, design, etc.). Intrinsic quality cues are related to technical specifications, which also involve physiological characteristics (Acebron and Dopico, 2000). Extrinsic cues, in contrast, are product-related attributes but not part of the physical product itself (Brečić et al., 2017); by definition, they exist outside the product (brand, price, country of origin, warranties, or services) and may be modified more easily.

Several previous studies explored the importance of olive oil attributes for consumers (Table 1).

The most commonly analysed olive oil attributes are price, origin, packaging, type, taste, and colour. Production method, brand, PDO, PGI, and organic label are explored less often. The intrinsic attribute of aroma has not been researched in previous works (Table 1), which is surprising because the aroma is a critical quality parameter for extra virgin olive oil (Genovese et al., 2019).

3 Methodology

A quantitative research methodology was used, and survey data were collected on a convenience sample of 471 tourists of different nationalities during their holiday in Croatia. The study was conducted in two northern Adriatic counties in Croatia: Istria County and Primorje-Gorski Kotar County, in the period of July to October 2018. These counties were chosen because Istria County is the most developed touristic county in Croatia, and the neighbouring Primorje-Gorski Kotar County is the only county in Croatia with two olive oils with protected denomination of origin (Čehić et al. 2020).

Table 1: Olive oil attributes researched in the scientific literature

Attributes	Authors
Price; origin; type; taste; purchasing place	Chan-Halbrendt et al., 2010
Price; origin; packaging; appearance; colour; production method	Menapace et al., 2011
Country of origin; region of origin; price; brand; olive variety; producer; taste; "extra virgin" mention; colour; appearance; package; PDO label; "organic" label	Dekhili et al., 2011
Area of origin; geographical designation (PDO and PGI); organic certification and price	Di Vita et al., 2013
Type; taste; colour; packaging; region of origin; and price	Mtimet et al., 2013
Price; origin; colour; packaging	Erraach et al., 2014
Price; type (extra virgin olive oil, virgin olive oil, and olive oil); bottle (glass, plastic); and production system (organic, conventional)	Bernabéu and Díaz, 2017

Source: Own contribution.

At the beginning of the survey, respondents were asked if they purchased olive oil during their holiday in Croatia, and only those who bought olive oil proceeded with further questions on local olive oil. All respondents completed a questionnaire on their socio-demographic and travel behaviour characteristics.

A survey section on olive oil consisted of questions about the usual place of purchase, purchasing reasons, and the importance of different local olive oil intrinsic and extrinsic attributes. Based on previous research (see Table 1), three intrinsic and seven extrinsic attributes of local olive oil were chosen for this study. The importance of these attributes was measured using a semantic scale.

Our questionnaire was initially designed in the Croatian language and then translated into English, German, Italian, and Slovenian. These languages were chosen based on data on the country of origin of foreign tourists in Croatia (Croatian Bureau of Statistics, Tourist arrivals in 2017). The translated questionnaires were checked by native speakers of the four languages to ensure clarity.

Data were collected within tourist facilities: nine hotels (three hotels with three stars and six hotels with four stars) and three campsites (two with three stars and one with four stars). Tourists were approached by a trained interviewer and asked to participate in an anonymous survey. The questionnaire was handed out in the appropriate language selected by respondents.

During on-site data collection in hotels, the interviewer was stationed while respondents were mobile, and at campsites the interviewer was mobile while respondents were stationed. This approach is described by Veal (2006).

The obtained data were processed conducting univariate, bivariate, and multivariate statistical analyses in the statistical program SPSS, ver. 21. The variable country of origin was binary coded based on whether respondents' country of origin was an olive oil producing country (Croatia, Italy, and Slovenia). This division was used because of existing differences between these two groups of consumers, primarily cultural and gastronomic aspects (Jiménez-Guerrero et al., 2012). Olive oil formerly has been consumed mainly by the olive oil producing countries, but in recent years consumption has grown faster in non-traditional, i.e., nonproducing, markets. These changing consumption patterns could be attributed to various campaigns for a healthier way of living, such as promoting meal preparation with olive oil instead of other fats and oils (Kavallari et al., 2011).

Univariate statistics were used for a description of the sample. A Chi-square test was used to explore the differences between consumers regarding their usual place of purchase and purchasing reasons, as wells as socio-demographic and travel behaviour variables. Multivariate statistics methods included binary logistic regression, principal component analysis, and two-step cluster analysis. The binary logistic regression has been used widely as a statistical method for analysing binary and binomial response data (Hatirli et al., 2004). We coded the binary data as 0=Non-buyers of olive oil, 1= Buyers of olive oil. In the binary logistics analysis, the enter method is employed to run a model predicting olive oil purchase (the outcome, dependent variable), using socio-demographic and travel behaviour variables as the predictor (independent) variables.

The segmentation of tourists was based on the principal component analysis (PCA) and the two-step cluster analysis, a methodology widely used in analyses of consumers' preferences toward products/food attributes, such as Cheddar cheese (Murray and Delahunty, 2000), instant coffee (Geel et al., 2005), milk and dairy products (Haas et al., 2016), and local food (Aprile et al, 2016).

Principal component analysis and cluster analysis are used to partition the sample into groups with similar characteristics to help identify consumers segments. Principal component analysis (PCA) in this research was performed on the set of ten items, measuring the importance of intrinsic and extrinsic olive oil attributes. Varimax rotation was used in the principal component analysis in order to maximise the sum of the variances of the squared loadings. Among all the coefficients, we considered those that have assumed value greater than one (Kaiser, 1960). Standardised factor scores were used as the input for a two-step cluster analysis. Two-step cluster analysis is a statistical procedure that is employed to identify similar groups or "clusters" of people or objects within data sets. It is considered more reliable and accurate when compared to traditional clustering methods such as the k-means clustering algorithm (Norusis, 2007). We consider two-step cluster analysis the most appropriate technique for this research because it is the only type of cluster analysis that forms clusters based on both continuous and categorical data (Chiu et al., 2001; Norusis, 2007). The difference between clusters was tested with an ANOVA and with the HSD Tukey test.

4 Result

A total of 471 responses were collected, of which the 452 adequately completed questionnaires were included in the analyses. The remaining 19 responses were dis-

carded because of insufficient answers. Out of the valid responses, 249 respondents stated they had purchased olive oil during their holiday in Croatia (55.1%).

The typical tourist who is also a customer of olive oil is a female who has a university education, is between 41 and 55 years old, has a monthly income between 1,501 and 2,500 euros, comes from a country that does not produce olive oil, lodges in a hotel, stays for seven days or more, and has visited the destination three or more times (see Table 2).

In order to explore the influence of socio-demographic and travelling behaviour variables on the purchase of local olive oil, a binary logistic regression was used with "purchased olive oil" as a dependent variable.

R^2 measures of the model were 0.121 for the Cox & Snell R^2 and 0.162 for the Nagelkerke R^2 (Table 3). Both Cox

Table 2: Socio-demographic characteristic and travelling behaviour of the sample

Socio-demographic characteristic (N=452)			**Total sample**		**Non-buyers of olive oil at the destination**		**Buyers of olive oil at the destination**	
			N	**%**	**N**	**%**	**N**	**%**
Variable	Gender	Male	152	36.9	59	34.7	93	38.6
		Female	259	63.1	111	65.3	148	61.4
	Education	Elementary school	13	3.1	7	3.6	6	2.6
		High school	134	31.8	71	36.4	63	27.8
		University and more	275	65.1	117	60	158	69.6
	Occupation	Self-employed	74	17.4	37	18.9	37	15.9
		Employed	306	71.8	140	71.8	166	71.8
		Retired	26	6.1	10	5.1	16	6.9
		Student	16	3.8	3	1.7	13	5.4
		Unemployed	4	0.9	4	2.5	0	0
	Age	Up to 25	35	8.5	16	8.6	19	8.4
		26–40	134	32.5	56	29.9	78	34.7
		41–55	181	43.9	86	46	95	42.2
		56–66	46	11.2	23	12.3	23	10.2
		67 and more	16	3.9	6	3.2	10	4.5
	Income	Up to 700 euro	18	5.2	6	4.1	12	6.0
		700–1,000 euro	53	15.3	21	14.4	32	15.9
		1,001–1,500 euro	84	24.2	41	28.1	43	21.4
		1,501–2,500 euro	101	29.1	42	28.7	59	29.4
		More than 2,500 euro	91	26.2	36	24.7	55	27.3
	Country of origin	Austria	101	23.8	38	19.7	63	25.3
		Germany	90	21.2	37	19.1	53	21.3
		Italy	86	20.2	65	33.7	21	8.4
		Croatia	32	7.5	7	3.6	25	10
		Slovenia	31	7.3	9	4.7	22	8.8
		Other	85	20	37	19.2	48	26.2
	Country producing or not producing of olive oil	Producer	150	35.3	81	42.1	69	29.6
		Nonproducer	275	64.7	111	57.9	164	70.4
Travel behaviour (N=452)			**N**	**%**	**N**	**%**	**N**	**%**
Variable	Type of accommodation	Hotel	338	74.8	161	79.9	177	71
		Campsite	114	25.2	42	20.1	72	29
	Length of stay	1–2 days	4	1	1	0.5	3	1.4
		3–6 days	96	24.2	55	29.3	41	19.5
		7 and more	298	74.8	132	70.2	166	79.1
	Number of previous visits	No previous visits	84	21.6	44	23.9	40	19.2
		1–2 times	56	14.4	35	19	24	11.5
		3 or more times	249	64.0	105	57.1	144	69.3

Source: Own elaboration.

& Snell R^2 value and Nagelkerke R^2 value indicated modest improvement in fit over the baseline model. The result of Hosmer and Lemeshow chi-square test was not significant ($p>0.05$), which indicates that the model fits better than the baseline model with no predictors. The correct initial classification was 54.7%. When the independent variables entered the model, the correct classification was increased from 54.7% to 62.6%. This finding can also be interpreted as an indicator of model-data fit. The results showed that the impacts of Number of previous visits—3 or more times and Country nonproducer of olive oil (Tourists country of origin) on buying local olive oil were statistically significant ($p<0.05$). Tourists who previously visited the destination three or more times are more likely to buy olive oil, as are tourists coming from countries that do not produce olive oil. These findings are in line with previous results stating the impact of prior experience on participation in tourist activities and expenditure patterns (Lehto

Table 3: The impact of socio-demographic and travel behaviour variables on the purchase of local olive oil using binary logistic regression analysis

Variables Not in the Equation							
Step 0	Variables		Score	df	Sig		
	Gender		1.243	1	.537		
	Age		1.331	1	.856		
	Education		2.390	1	.495		
	Occupation		1.783	1	.776		
	Income		3.686	1	.450		
	Type of accommodation		1.751	1	.186		
	Length of stay		2.294	1	.318		
	Number of previous visits		5.408	1	.020		
	From a country producing or not producing olive oil		10.066	1	.002		
	Overall statistics		31.639	9	.084		
	Overall percentage correct		54.7%				
	The cut value		0.500				
Variables in the Equation							
Step 1	Variables	B	SE.	Wald	df	Sig.	Exp (B)
	Gender	.229	.297	.592	1	.442	1.257
	Age	.273	.642	.181	1	.671	1.314
	Education	1.083	.951	1.299	1	.254	2.955
	Occupation	.776	.770	1.015	1	.314	1.072
	Income	-.947	.956	.981	1	.322	2.181
	Type of accommodation	-.294	.315	.869	1	.351	.738
	Length of stay	-.197	.338	.339	1	.560	.821
	Number of previous visits: 3 or more times	.894	.351	6.488	1	**.011**	2.318
	Provenance from a country producing or not producing olive oil	1.059	.324	10.713	1	**.001**	2.828
	Constant	-2.052	1.420	2.086	1	.149	.129
Model diagnostics **Classification of variables in equation results**							
Overall percentage correct		62.6%					
The cut value		0.500					
Omnibus test of model coefficients		Chi-Square: 34.175			Sig: .047		
Hosmer and Lemeshow test		Chi-Square: 9.209			Sig: .325		
Cox and Snell R square		.121					
Nagelkerke R square		.162					

Note: STEP 0 shows the results of a score test. The column labelled "Score" gives the estimated change in the model fit if the term is added to the model, the other two columns give the degrees of freedom (df) and p-value (Sig.).
STEP 1 shows the regression coefficients (B), their standard errors (SE), the Wald test statistic with associated degrees of freedom (df) and p-values (Sig.), and the Exp (B) (exponentiated coefficient).

et al., 2004; Wang, 2004; Skuras et al., 2006). Tourist's country of origin or nationality was found to influence tourist behaviour (Thrane and Farstad, 2012), in line with our results regarding buying or not buying olive oil in a tourist destination. Other socio-demographic and travel behaviour variables showed non-significant results in the model. Wang also found that the effects of socio-demographic variables on the shopping behavior of tourists are not significant (2004).

4.1 Place of purchase of local olive oil

Tourists most commonly chose olive farms as a purchasing place for olive oil during their holiday (29.5%; Figure 1). Olive farms are mainly situated in small villages, and Murphy et al. (2013) suggest that providing shopping points in such areas is a way to support local producers. The second most common place of purchase was road stands (25%), followed by supermarkets (24.1%). Some less frequently chosen places of purchase were delicatessen shops (11.8%) and, especially, fairs and olive mills (5.1% and 4.5%, respectively).

The Chi-square test was used to test the relationship between socio-demographic characteristics and travel behaviour of respondents, on the one hand, and their usual place of purchase of local olive oil, on the other. Tourists staying one to two days in a destination are more likely to choose supermarkets as a place of purchase; tourists staying three to six days prefer olive farms; and tourists staying seven days or longer in a destination are more likely to buy olive oil in olive mills (Pearson's Chi-square coefficient = 19.672; p = 0.033). This result could be explained by the fact that tourists who make a short stay at a destination do not have time to search for alternative places of purchase and therefore choose supermarkets as accessible points of purchase. In contrast, tourists staying longer in the destination have enough time to search for a specific place of purchase. The store location is the most important store attribute because of the considerable amount of time first-time visitors spend orienting themselves to a tourist area (Vogt and Fesenmaier, 1995). Whether customers select a particular store or not depends on how well retail competitors satisfy various store attributes (Swanson and Horridge, 2002).

Tourists coming from countries which are nonproducers of olive oil prefer to buy olive oil in delicatessen shops and at olive farms, as opposed to tourists coming from olive oil producing countries, who instead chose supermarkets and road stands (Pearson's Chi-square coefficient = 14.740; p = 0.012). The reason for such behaviours could be that that tourists from countries that are nonproducers of olive oil are not very familiar with olive oil production and quality. Therefore, they are looking for more information about the product directly from experts, such as producers or employees of delicatessen shops, in contrast to tourists from countries where olive oil is produced, who are already familiar with the product.

The other socio-demographic characteristics, namely gender, age, education, occupation, income, type of accommodation, and number of previous visits are not significant in relation to the most used place of purchase.

4.2 Reason for purchasing local olive oil

The highest percentage of respondents stated they had purchased olive oil at the destination in order to bring it home (54.9%). One-fourth of the respondents stated that they purchased olive oil to consume during their holiday in the destination (24.7%), and the remainder (20.4%) purchased olive oil for both reasons: to consume it in the destination and to bring it home (Figure 2).

As expected, tourists staying in campsites are more likely to purchase olive oil for consumption in a destination compared to tourists staying in hotels (Pearson's Chi-square coefficient = 5.977; p = 0.050), as tourists in campsites often prepare their own meals.

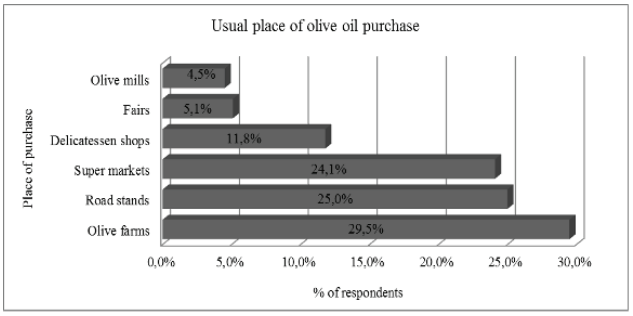

Figure 1: Usual place of olive oil purchase
Source: Own elaboration.

Figure 2: Reasons for olive oil purchase
Source: Own elaboration.

The socio-demographic characteristics of gender, age, education, occupation, income, country of origin, and other travel behaviour characteristics (number of previous visits and length of stay) were not significant in relation to reasons for olive oil purchase.

4.3 Importance of the intrinsic and extrinsic local olive oil attributes

Respondents (buyers) of local olive oil evaluated the importance of ten olive oil characteristics with a semantic scale. The Cronbach's alpha value for the evaluated item pool of attributes of olive oil was 0,841. All three intrinsic attributes are evaluated as important, with taste and aroma evaluated as more important than the colour of olive oil. The olive oil category and method of production are the most important extrinsic olive oil attributes, with price and packaging least important, as valued by tourists (Table 4).

Goeldner et al. (2000) suggested that a product's relationship to the local area and its authenticity were the most important product attributes (Swanson, 2004). The attributes PDO/PGI and country of origin were evaluated medium to high by respondents, as was the eco-label. The eco-label provides useful information for tourists in differentiating the nature of the products (Chin et al., 2018). Further, several studies found a positive and significant relationship between eco-labels and green purchasing behaviour in tourism (Chin et al., 2018; Chekima et al., 2016; Dekhili and Achabou, 2014).

Price and value for money are commonly high on the list of factors influencing the choice of most commercial products (Steenhuis et al., 2011). However, previous research showed that price was less important to tourists at a destination as a specific consumer group (Altintzoglou et al., 2016). The attribute packaging of olive oil was the least important attribute; the same result was obtained by Altintzoglou et al. (2016) in a study examining factors that influence tourists when considering buying food.

4.4 Components of local olive olive oil attributes

The sample size of 249 respondents is acceptable for PCA technique application, as the preferable sample size is 100 participants or more (Hair et al., 1995, cited by Williams et al., 2010). The Kaiser-Meyer-Olkin (KMO) test result was sufficient at 0.758 (Tabachnick and Fidell, 2013), indicating that the PCA may be useful with this data set based on the ability of the underlying components to explain common variance in the data. Bartlett's test of sphericity showed that the overall correlation matrix was significant ($p < .000$). For results interpretation, PCA uses a components requirement for eigenvalues greater than 1. After Varimax rotation, nine items were retained in a three-component solution, representing a total of 70.504% cumulative variance (Table 5). The item *colour* was eliminated for the low loading of 0.409.

The first component dimension, *Information*, explains 40.651% of the total variance. The component consists of five items describing different pieces of information that may be used concerning olive oil. The most important olive oil attributes in the component *Information* were "method of production" and "olive oil category." These two attributes can directly inform the customer about the quality of the product.

Table 4: Importance of intrinsic and extrinsic attributes of olive oil for tourists (buyers) of olive oil in Croatia

Intrinsic attributes	Mean (M)	SD
Taste	4.62	0.680
Aroma	4.51	0.744
Colour	3.84	0.995
Extrinsic attributes		
Olive oil category (virgin, extra virgin)	4.21	0.907
Method of production (cold-pressed)	4.12	1.035
Protected designation of origin (PDO)/protected geographical indication (PGI)	3.90	1.043
Product eco-label	3.90	1.007
Country of origin	3.82	1.037
Price	3.44	0.883
Packaging	3.18	1.112

Source: Own elaboration.

Table 5: Principal component analysis for the importance of local olive oil attributes

Component/item (% of explained variance)	Mean (M)	SD	Factor loading	Cronbach α
Component 1: *Information (40.651%)*				.845
Protected designation (origin, geographical indication)	3.90	1.043	0.828	
Product eco-label	3.90	1.007	0.798	
Country of origin	3.82	1.037	0.759	
Method of production (cold pressed)	4.12	1.035	0.757	
Olive oil category (virgin, extra virgin)	4.21	0.907	0.654	
Component 2: *Flavour (15.247%)*				.844
Taste	4.62	0.680	0.900	
Aroma	4.51	0.744	0.891	
Component 3: *Price and packaging (14.606%)*				.681
Price	3.44	0.883	0.856	
Packaging	3.18	1.112	0.800	

Source: Own elaboration.

The second component, *Flavour*, explains 15.247% of the total variance. This factor consists of two intrinsic items concerning olive oil: taste and aroma. Taste and aroma are properties used for organoleptic evaluations of olive oil. Olive oil can be described with positive ("fruity," "bitter," and "pungent") and negative (for instance, "rancid," "fusty," "musty," and "winey") attributes (Circi et al., 2017). Another important function of taste and smell for food souvenirs is the possibility that they will evoke for the tourist the taste or smell of a vacation destination after the return home (Lin and Mao, 2015).

The last component, *Price and packaging*, explains 14.606% of the total variance. This factor consists of the two named extrinsic attributes, that is, "price" and "packaging."

4.5 Segmentation of local olive oil consumers

Three components identified in the PCA were used as input variables to a two-step cluster analysis. The silhouette measure of cohesion and separation is above 0.5, showing a fair separation distance between clusters (Tkaczynski, 2017). Four clusters were revealed within the data set (Table 6).

The average member of each of the four clusters is a woman, with a faculty degree, employed, aged between 41 and 55 years old, from a country that does not produce olive oil, is staying at the destination seven or more days, has visited the destination three or more times, and commonly purchases olive oil to bring home.

Cluster 1 *The exterior lovers*

The first cluster is the largest one, with 37.4% respondents. Members of this cluster most value component number three, *Price and packaging,* and component number one, *Information;* the second component, *Flavour,* is not important for the respondent in this cluster.

Members of this cluster most valued the product eco-label (M=4.47), country of origin (M=4.45), and PDO/PGI (M=4.43) to a statistically different degree from other three clusters (F= 47.240, p=0.000, F=4.45, p=0.000, F=48.471, p=0.000). It is also interesting to highlight that the highest score addressed the attributes packaging (M=4.15) and price (M=3.99), thus differing significantly from the other three clusters (F=66.549, p=0.000, F=55.104, p=0.000). Despite the high rates for intrinsic attributes of taste and aroma, members of this cluster give a high score to the attribute of colour (M=4.28), a result statistically different in comparison to the other three clusters (F=19.733, p=0.000).

Members of this cluster have a monthly income from 1,501 to 2,500 euros, stay in a hotel, and purchase olive oil at olive farms and supermarkets.

Cluster 2 *The labels lovers*

The second cluster represents 24.3% of respondents. The members of this cluster are most influenced by the labels and information on the bottle of olive oil. Somewhat less important to them is the component *Flavour*. *Price and packaging* are irrelevant for respondents of this cluster.

For the members of this cluster, the most important olive oil attributes are the extrinsic ones: olive oil category (M=4.71) and method of production (M=4.70). Regard-

Table 6: Final cluster centers

Component	Cluster				F – value
	1 *The exterior lovers*	2 *The labels lovers*	3 *The indifferent consumers*	4 *The experts*	
Information	.551127	.637358	-.793931	-.997363	96.276**
Flavour	-.008902	.138469	-2.067185	.623947	107.501**
Price and packaging	.823677	-1.150956	-.433139	.055069	98.627**
Sample size (%)	37.4%, n=86	24.3%, n=56	10%, n=23	28.3%, n=65	

** Significant at level p<0,001.
Source: Own elaboration.

ing these two attributes, the members of this cluster are statistically different from members of cluster three (*The indifferent consumers)* (F=26.013, p=0.000, F=45.783, p=0.000). In comparison to the members of the other clusters, the members of cluster two give the lowest value to price (M=2.64) and packaging (M=2.34). This profile feature is statistically different from clusters one (*The exterior lovers*) and four (*The expert*) (F=55.104, p=0.000, F=66.549, p=0.000). Of the intrinsic olive oil attributes, the members of this cluster focus on taste (M=4.71), aroma (M=4.70) and, to some degree, colour (M=3.66).

Members of this cluster show similarities with cluster one regarding monthly income, type of accommodation, and place of purchase.

Cluster 3 *The indifferent consumers*

The indifferent consumers is the smallest cluster, representing just 10% of the total sample. Respondents in this cluster showe the least interest in all proposed attributes. They are indifferent toward all three identified components of olive oil attributes. Members of this cluster give the smallest score to the colour of olive oil (M=2.74, F=19.733, p=0.000). They differ statistically from the other three clusters in this rating, as well as in their ratings of the other two intrinsic olive oil attributes. From the list of extrinsic olive oil attributes, the olive oil category (M=3.17) is regarded as the most important and is statistically different from the other three clusters, who all rate this attribute higher than cluster three members do (F=26.013, p=0.000). Members of this cluster have an average monthly income between 1,001 and 1,500 euros, are situated in campsites, and predominantly purchase olive oil at olive farms and road stands.

Cluster 4 *The expert*

This cluster contains 28.3% of the respondents. Cluster members focus on the intrinsic product attributes for evaluation of olive oil. They gave a higher score to taste (M=4.89) and aroma (M=4.75) and were statistically differ from cluster three (*The indifferent consumers*) (F=19.066, P=0.000), who rated these two attributes with relatively low grades. Of the extrinsic olive oil attributes, the members of this cluster are most influenced by the olive oil category (M=3.86) and price (M=3.69). The difference from the other three clusters is statistically significantly (F=26.013, p=0.000 and F=55.104, p=0.000).

The lowest interest rate is for PDO and PGI (M = 3.09) and country of origin (M = 3.09); this shows a statistically significant difference for these two attributes compared to cluster two (*The labels lover*), whose members rate these attributes as somewhat more important (F=48.471, p=0.000 and F=46.045, p=0.000).

Members of this cluster have an average monthly income between 1,500 and 2,500 euros, are situated in a hotel, and predominantly purchase olive oil at olive farms and road stands.

Overall, concerning the socio-demographic and travel behaviour variables, the segments do not significantly differ from each other, except regarding the type of accommodation. The members belonging to clusters one, two, and four are mainly situated in hotels, while the members of cluster three are predominantly situated in a campsite (x^2 = 20.038, p=0.000).

Another difference found regarding cluster membership concerned the usual place of olive oil purchase. Members of all four segments like to buy olive oil at olive farms, but *The exterior lovers* and *The labels lovers* additionally prefer supermarkets, while *The indifferent consumers*, as well as the experts, like to buy olive oil at road stands (x^2 =22.734, p=0.015).

5 Discussion and Conclusion

During their stay in a destination, tourists represent a very interesting market niche for local agricultural products, especially for olive oil in Mediterranean destinations, where olive oil represents a typical and traditional Mediterranean product. Nevertheless, tourists' shopping behaviour and the importance of olive oil attributes are not much researched in scientific literature.

One of the few papers investigating tourist's preferences regarding olive oil was a study conducted by Sabbatini et al. (2016), which explored the olive oil preferences of tourists during their visits to the island of Crete. The results of the study demonstrated that the tourists' country of origin is one of the most important drivers in olive oil choice. Also, tourists who stay longer at a destination are more likely to buy olive oil.

In our research, a total of 55.1% of the surveyed tourists stated they had purchased local olive oil during their holiday in Croatia. Such a high share of tourists interested in local olive oil could help in the further development of the olive oil sector; this market segment can represent a great opportunity, especially for small olive oil producers. Further, these findings could be used in marketing efforts to establish diverse offerings at other Mediterranean tourist destinations.

As in the study by Sabbatini et al. (2016), we found that both the number of previous visits to the destination and the tourists' country of origin are significant predictors of local olive oil purchases. Specifically, tourists who come back to a destination several times are more likely to buy local olive oil. This tourist profile represents a strategic segment of interest to local olive oil producers. Therefore, olive oil producers could establish a closer connection with tourist accommodation providers to more easily target this tourist segment. Traditionally, Mediterranean destinations are characterised by the phenomenon of repeat visitation (Alegre and Cladera, 2006), providing an additional incentive to help olive oil producers develop an olive oil market in a destination.

Tourists coming from traditional olive oil producing countries are less likely to buy local olive oil, as they come from markets saturated with olive oil supplies, including local olive oils. On the contrary, tourists coming from countries that do not produce olive oil have shown a high interest in local olive oils; this finding is in line with Sabbatini et al. (2016). This is favourable for local producers, as consumption of olive oil in nonproducing countries or emerging markets shows an increasing trend (Karanikolas et al., 2018; Roselli et al., 2016; Sayadi et al., 2016).

Therefore, the primary focus for local olive oil stakeholders at the destination should be on tourists from nonproducing countries. Additionally, national tourism associations could include the promotion of local olive oils in their strategic marketing plans for Mediterranean destinations, especially in nonproducing countries.

No other socio-demographic characteristic or travel behaviour variable influences the purchasing behaviour of tourists, indicating that a unique marketing strategy may be used to target repeat visitors, especially those coming from nonproducing countries. The most appreciated olive oil attributes were taste and aroma (intrinsic attributes), followed by the olive oil category and the method of production (extrinsic attributes). The extrinsic attributes of price and packaging were shown to be the least important.

In the past, the intrinsic olive oil attributes of taste and colour mostly influenced consumers' choices (Monteleone et al., 1997; Cicia et al., 2002; Finotti et al., 2007). However, in the last two decades, the production system in the olive oil industry has changed, which has led to the production of oils with specific sensory characteristics (pungent, bitter, fruity, etc.). Some consumers accepted these changes well, while some remained traditionally connected to taste and colour (Leonetti et al., 2009; Delgado et al., 2013). In the literature, the geographical origin of the olive oil is one of the extrinsic attributes most valued by consumers (Dekhili et al., 2011; Aprile et al., 2012). At the same time, PDO/PGI, which shows a connection with a specific area of production, is also important to consumers (Scarpa and Del Giudice, 2004; Menapace et al., 2008). Consumer preferences for olive oil category and method of production are less researched. In the research by Aprile et al. (2012), a category of extra virgin olive oil evoked a willingness to pay more for this category of oils. In their research, Panico et al. (2014) stated that production method, information on the origin, and organoleptic characteristics play a major role in determining the value of extra virgin olive oil. Price is a particular product attribute, which consumers often relate to product quality. However, Martínez et al. (2002) stated that olive oil is not a price-sensitive product category. Dekhili et al. (2011) founded that packaging, colour, and brand of olive oil are less important than intrinsic qualities for surveyed responders in Tunisia and France.

Foreign tourists, like those researched in this paper, form a heterogeneous group, coming from different countries with different eating habits and product preferences. Therefore, olive oil producers targeting foreign tourists should provide complex olive oil or a wider range of oils with regard to their sensory properties. However, oil quality and sensory properties depend on the olive

variety and the traditional production method. A pleasant appearance, as well as direct communication with tourists, with an emphasis on local attributes, should help promote both local olive oils and the whole destination.

For tourists, the most usual places for making purchases of olive oil are olive farms, followed by road stands and supermarkets. More than half of respondents stated they habitually bought olive oil directly from producers, either at a farm gate or at road stands. This result shows the tourists' interest in communicating with producers, which allows them to get direct, accurate information on the product and its production. Therefore, local olive oil producers should intensively use direct communication with tourists, presenting not only their oil and its production methods but also implementing storytelling strategies presenting the whole farm and the olive oil destination. In addition to direct communication, olive oil producers should take the opportunity to organize oil tastings, to take advantage of the importance placed on intrinsic olive oil attributes.

The study identified four distinct consumer segments based on the importance of intrinsic and extrinsic olive oil attributes: *The exterior lovers* (37.4%), *The labels lover* (24.3%), *The indifferent consumers* (10%), and *The experts* (28.3%). The first segment (*The exterior lovers*) was the biggest and was significantly more affected by price and packaging compared to the other clusters. This group was also affected by the information on the label, especially the country of origin and PDO/PGI certification. Members of this cluster do not attach importance to the flavour of olive oil. *The label lover* is primarily attracted by available information and seals on the product label. Some attention is also directed at the flavour of olive oil. Concurrently, members of this cluster aren't affected by the price and packaging of the product. *The indifferent consumers,* cluster three, was the smallest, and tourists from this segment did not particularly care about intrinsic or extrinsic olive oil attributes. *The experts* focused on the intrinsic olive oil attributes of taste and aroma, the main organoleptic characteristics for evaluating olive oil quality. They are predominantly indifferent regarding packaging and price and are not affected by available information on the label.

Apart from differences regarding important of olive oil attributes, it was found that *The Indifferent consumers* were mainly situated in campsites, while the others were accommodated in hotels. *The experts* chose olive farms as a usual purchasing place more often than all other consumers.

A common conclusion for building good, sustainable management practices for tourist destinations, especially in Mediterranean areas characterised by repeated visitors, is to achieve a direct and easy contact between tourists and stakeholders involved in olive oil production. There is a need to develop a complex tourist product—local olive oil with particular sensorial attributes related to autochthonous olive varieties, location, and methods of production. It is also important to adequately incorporate the information and labels on the bottle as promotional tools. At the same time, it is very important to offer tasting possibilities and education for the tourists in the destination.

6 Limitations and Future Directions

The limitation of this study primarily regards the structure of the sample and data collection. The sample contains a higher percentage of female respondents. Also, data collection was not performed in private accommodations (apartments, holiday homes, etc.), a very common type of tourist accommodation in Croatia. These limitations should be addressed in subsequent studies. To verify the credibility of the results obtained in this study, we recommend repeating the study in other Mediterranean tourist destinations.

Future research could focus on analysing attributes of the most common places of olive oil purchase in a destination (olive farms, road stands, and supermarkets) to identify the attributes that are most important to tourists/buyers.

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