

Willingness to pay price premium for products of Croatian family farms

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ABSTRACT

The aim of this research is to examine whether consumers in Croatia behave ethically, focusing on whether they believe that family farm products have ethical attributes and whether they are willing to pay a higher price (premium) for such products. Given the specificity of the market niche of family farm products, the paper provides an innovative and different view of the product market with a focus on characteristics rather than the good itself. In the paper, family farm products are viewed as goods with ethical attributes, ethics in consumer behavior is examined, as well as the extent to which consumers are willing to pay a price premium for an ethical good, i.e., its ethical attributes. The sample consisted of 143 participants aged between 20 and 71. The results show that consumers in Croatia commonly behave ethically, perceive the characteristics of family farm products as ethical and are willing to pay a price premium for these products. Women perceive family farm products more ethically, and consumers perceive family farm products to have ethical attributes regardless of how frequently they buy these products.

KEYWORDS

ethical consumer, attribute demand, family farm products, willingness to pay a price premium

JEL CODES

D12, Q12

1. INTRODUCTION

Mass production and consumption have led to disturbances in the ecological balance and have reduced concerns for workers' rights. The global rise of awareness about these problems has also

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been reflected in the behavior of the modern consumer. Subsequently, the market is currently undergoing changes towards a greater choice between conventional products and products that are environmentally and socially responsible. Consumers are increasingly looking for products that will positively affect them and their environment, and because of this “higher goal”, they are willing to pay more for products that possess such ethical attributes.

This paper provides insight into the ethical behavior of consumers in Croatia. The phenomena of ethical attributes and willingness to pay (WTP) a price premium are analyzed on the example of products of Croatian family farms.

Family farms are an organizational form of an agricultural business in Croatia and imply an organizational form of a *person, a farmer who, to generate income, independently and permanently performs an agricultural activity and related ancillary activities, based on the use of their and/or leased production resources and on the work, knowledge, and skills of family members* (Narodne novine 2019). Most of them being in northwestern Croatia, today, they are highly valued and widely represented, especially in the field of tourism, where family farms offer accommodation and food, but also local products (Gregorić et al. 2020). In 2019, there were 162,966 family farms in Croatia, and they made up 95% of the total number of agricultural entities in the country, but, interestingly, almost half of them (74,882) did not have a single registered member (Agencija za plaćanja u poljoprivredi, ribarstvu i ruralnom turizmu 2019).

The fact that agricultural producers in Croatia have recognized the importance of a new market in which consumers are increasingly looking for organic products is also confirmed by the growth of ecological agricultural entities. According to the data of the Croatian Bureau of Statistics (2020), the number of ecological producers and processors has been constantly growing between 2013 and 2020 (Table 1).

Although the number of organic farmers in relation to the total number of farmers is small, it is not known how many ecological family farms there are. This does not mean that most family farms are non-ecological, but they do not have enough ecological characteristics of production and/or the necessary certificates to be classified as ecological. The process of getting a certificate is long, expensive, and has many requirements.

The fact that the products of Croatian family farms do possess features of ecological products is supported by the research of Gregorić et al. (2020), which indicates that 76.2% of the surveyed family farms operate socially responsibly. They have ethical attributes related to the development of the local community (e.g., cooperation with other family farms) and environmental protection (e.g., waste sorting, use of organic fertilizers and pest control, composting), which would mean taking care of both people (who are a part of and/or outside of the organization) and the environment.

It is difficult to classify family farm products into a single category according to ethical attributes and this was also shown by the research of Naspetti and Bodini (2008), which

Table 1. The number of organic agricultural farmers, Croatia

	2013	2014	2015.	2016	2017	2018	2019	2020
Agricultural producers	1,608	2,043	3,061	3,546	4,023	4,374	5,153	5,548
Agricultural processors	181	237	320	312	357	368	395	389

Source: Državni zavod za statistiku Republike Hrvatske (2020).



examined the differences in consumers' WTP a premium for organic and local products. They observed that, in some situations, organic and local products were perceived as mutual substitutes, and sometimes as complements. For these reasons, in this study, the ethical attributes of family farm products will be examined with both local attributes and environmental (ecological) attributes. The main research goal is to examine whether consumers behave ethically, whether they believe that family farm products have ethical attributes, and whether they are willing to pay a higher price for such products. Furthermore, the paper also aims to examine socio-demographic and purchase frequency differences in consumers' WTP a price premium for family farm products, ethical behavior, and perception of ethical attributes.

The first part of the paper provides an overview of the literature and results of previous research in this field, which will provide a theoretical framework for this study.

2. LITERATURE OVERVIEW: THEORETICAL FRAMEWORK

Changes in consumer preferences often lead to changes in the market and the creation of demand for new products. The food market is currently experiencing a significant increase in demand for products that meet not only the required nutritional characteristics (Amanor-Boadu – Schnitz 2008), but also certain additional requirements of the modern consumer. Consumers are willing to pay more for conventional goods with such additional characteristics (attributes) (Matsumoto – Otsuki 2018). One such characteristic is the ethical characteristic of goods, which is the focus of this research. The following is an overview of previous research in this field.

2.1. Ethical consumer and the demand for attributes

A new approach to consumer theory was given by Lancaster (1966). This theory moved away from traditional consumer theory according to which utility provided by a good was valued as such. According to his theory, the internal (intrinsic) characteristics of the good are those that provide the consumer with usefulness, i.e., satisfaction, and therefore value. Drawing on Lancaster's theory, Amanor-Boadu and Schnitz (2008) highlight the factors that characterize the ethical consumer. According to them, ethical consumers benefit from the consumption of external (extrinsic) characteristics of products, and not only internal. The explanation for such behavior is in Maslow's hierarchy of needs. Ethical behavior comes from the orientation of the ethical consumer not only towards themselves, but towards society and the consequences that their consumption has for society. In the hierarchy of needs, ethical consumers are considered to have reached the highest level, the level of self-actualization, which is why they derive satisfaction and usefulness from the knowledge that their ethical consumption decisions have a positive impact on society and the environment.

According to De Pelsmacker et al. (2005), ethical consumers are oriented toward different forms of ethical consumption and can be segmented according to the direction of the effects of such consumption. Some forms of ethical consumption have positive effects on the environment (green, environmentally-friendly products, products that "protect" the welfare of animals, are organic, etc.), while others have positive effects on humans (products produced without the use of child labor, fair-trade or products of fair exchange, i.e., goods produced by workers who are paid fairly, local products, etc.).

According to Gulyas (2008), ethical consumer behavior can be divided into six groups of consumer action: non-consumption (non-use of certain products), boycott (intentional non-use



of certain products), value-based regular shopping (daily purchase of organic products), positive boycott (purchase of a specific product to support a goal), usage (responsible consumption, recycling, reuse, etc.) and placement after usage, disposal (waste sorting, etc.).

Furthermore, the question presents itself: would ethical consumers be equally guided by ethics when buying different goods? Carrigan and Attalla (2001) found that ethical consumers are selectively ethical for different product categories. They observed that the consumption of goods such as clothing and footwear would be more influenced by other extrinsic characteristics compared to ethical ones, while in food, it is precisely the ethical characteristics that make the consumer demand such goods.

A review of the literature confirms that scientific research is focused on specific types of products with ethical characteristics, perhaps precisely because of the different attitudes of consumers towards different goods. Research has mainly been focused on green products (Hansla et al. 2008; Gregory-Smith et al. 2017), fair trade products (De Pelsmacker et al. 2005), organic products (Zanoli – Naspetti 2002; Amanor-Boadu – Schnitz 2008; Michaelidou – Hassan 2010; Napolitano et al. 2010) and local products (Naspetti – Bodini 2008; Jekanowski et al. 2000). Very few studies analyze various product categories, such as McGoldrick and Freestone (2008), whose research included fruit and vegetables, cleaning products, packaged foods and beverages, meat and fish, clothing, and electrical appliances. In addition to different types of products, they also analyzed different behaviors of ethical consumers. Some authors have focused on specific forms of ethical consumer behavior, such as product boycotts (Carrigan – Attalla 2001) or positive boycotts (Gulyas 2008). Although the approaches of these studies are different, they overlap in the examination of consumer's WTP a higher price for products with ethical characteristics (attributes).

2.2. Willingness to pay a price premium for ethical attributes of products

WTP is used in many studies as a measure to assess the ethical behavior of consumers in the field of ethical consumption (buying environmentally-friendly, green, eco-friendly, pro-environmental, environmentally conscious/concerned products), and is measured as an expression of WTP a higher price than conventional alternatives for such products (Gregory-Smith et al. 2017). The results of previous research also point to consumers WTP a higher price for products with ethical attributes (Li-Wei 2014).

Gregory-Smith et al. (2017) investigated the factors influencing the WTP a higher price for environmentally-friendly products among consumers in 28 EU countries. They noted, among other things, that there is a significant positive link between the perceived impact of environmentally friendly products on the environment and the WTP a higher price for such products precisely because of their environmental attributes. Consumers are willing to pay a higher price for ecological products if they have fewer negative environmental impacts. The same result was obtained for Croatia, which was one of the countries included in the research.

McGoldrick and Freestone (2008) obtained the same results as Gregory-Smith et al. (2017). Their results, based on a survey of 6,000 consumers in the UK, show that consumers are willing to pay a price premium for different types of products if they are confident in their ethical attributes. Likewise, they observed that to choose a more expensive ethical alternative, the consumer needs to be satisfied with other characteristics of the product, not just the ethics of its attributes. Therefore, a longer period is expected for consumer behavior to shift towards buying ethical products.



Some research analyzed different ethical attributes of products. Li-Wei (2014) examined WTP for three ethical attributes (fair exchange, recyclability and organic) and finds that consumers have a perception of the higher value of the product when it has more ethical attributes. The more ethical attributes a product has, the more likely it is that consumers will pay a higher price for that product because they consider it more valuable with such attributes.

Trudel and Cotte (2009) examined the attitude of consumers towards ethically produced goods on the example of ethical products (coffee and organic cotton). They were interested in whether consumers would be willing to pay more for ethically produced goods, what the consumers' attitude towards ethical goods is in relation to unethical ones, and whether consumers are willing to reward (pay more) producers who care about the ethical characteristics of goods. The results obtained imply that consumers are willing to pay more for ethical goods, but also that they will ask producers to reduce the price if their goods are produced in an unethical way. The results also showed that consumers are willing to punish unethical producers more than they are willing to reward ethical ones.

In a focus group study in Italy, Naspetti and Bodini (2008) place emphasis on *organic and local products*. According to the results, participants were willing to pay a higher price for local products, but only for those of plant origin such as local vegetables, while for products of animal origin, they were willing to pay more only if they had organic attributes. Zarić et al. (2017) obtained similar results. Consumers are more likely to pay a price premium for locally produced fruit and vegetables. A study conducted in New Zealand, which examined WTP for local products, found that consumers were willing to pay more for local products than imported ones, although two groups of consumers were observed among the participants. The first group is willing to buy both local and imported products depending on the price of the product, and the second group is not willing to pay more for imported products at all, but only for local products (Berg – Preston 2017).

Due to the complexity of ethical consumer behavior and the overall diversity of goods analyzed, although the literature examines the same concept (ethical consumer and their WTP a price premium over alternatives), the results still differ slightly (Cox Park 2018). This was expected, as ethical consumers are not a homogeneous group and there are numerous individual differences in consumer preferences regarding ethical attributes, but also differences in the sociodemographic characteristics of consumers.

2.3. Sociodemographic characteristics of ethical consumers

In most studies, no effect of gender, age, education, income, or other sociodemographic characteristics of consumers on WTP a higher price for ethical products in general, was found. However, it was observed that different consumer groups perceive product ethics differently and differ in WTP when it comes to specific attributes and/or specific ethical products.

2.3.1. Gender/age/education. In a study examining whether there is an effect of demographic characteristics of participants on WTP for attributes like *fair trade, green products, locally produced, buy one donate one and donate part of the earnings*, some differences in consumers were found (Cox Park 2018). According to the results obtained, women were more likely to pay more than men for green attributes, and younger participants were willing to pay a higher price for fair exchange products compared to older participants. In terms of education, a positive effect was found on WTP only for green goods. The higher the level of education, the more consumers were willing to pay a higher price for such goods.



2.3.2. Gender/age. In another study by [Li-Wei \(2014\)](#), no differences were observed by gender, age, and amount of income in the WTP for products with ethical attributes, but for some attributes, a difference was still observed. For women, organic and fair trade attributes were more important than for men, while the attribute of *recyclability* was more important for younger participants than for older participants.

2.3.3. Gender. According to [Elliott \(2013\)](#), women were more willing to buy *green goods* than men.

2.3.4. Income/age. Effects of consumer characteristics on WTP for the locally produced products, such as income, among other consumer characteristics were investigated by [Berg and Preston \(2017\)](#). If *local products* are viewed as a normal good, consumers with higher incomes were willing to pay more for local products because they generated higher annual consumption overall. Likewise, people over the age of 50 with higher incomes were willing to pay more for local production and were expected to spend more annually on the farmers market.

2.3.5. Millennials (Australia and Indonesia). [Bucic et al. \(2012\)](#) focused the analysis of ethical consumption on a specific group of participants – millennials, people born between 1985 and 1999 in two different cultural environments, Australia ($n = 807$) and Indonesia ($n = 371$), because they are characterized by their social, cultural, and environmental consciousness and are more community and self-oriented. It was observed that about 20–30% of surveyed millennials decided to buy products with ethical attributes monthly, while one-third (33%) decided to buy them occasionally. The results also showed that for millennials as a group, attributes such as *quality, price, packaging, or availability* were more important than ethical attributes, and the authors concluded that there were a few subgroups within this group that differed according to the level of ethical behavior and that, for this reason, millennials should not be viewed as a group of exclusively ethical consumers.

3. RESEARCH HYPOTHESES

Ethical consumer behavior has long been a researched topic, but it is still extremely relevant due to the continuous and strong growth of the ethical product market. It is evident that there is a constant demand on the market for products with more ethical characteristics. Thus, in the food market, more consumers are looking for products that meet the criteria of ecological, organic, animal products grown in natural conditions, locally produced products and more. Producers have recognized an increase in demand for such products, followed by an increase in producers who are continuously investing in the ethical characteristics of their products. According to the Research Institute of Organic Agriculture, the value in organic retail sales, the number of organic producers and organic areas (farmland) is constantly increasing in the EU. Organic product sales increased from €24.8 billion in 2015 to €44.8 billion in 2020. Also, from 2015 to 2020, the number of organic producers increased by 31% and the farmland increased by 40% ([Research Institute of Organic Agriculture 2022](#)). The results of previous research show that consumers are willing to pay a higher price for products that provide more, specifically buying those that will have a positive impact, not only on themselves but also on the environment.



In this sense, this paper also poses the questions of whether consumers in Croatia behave ethically (ethical consumer - EC), whether and how often they buy family farm products, whether they are willing to pay a higher price premium on family farm products (WTP FF), and whether they perceive family farm products as ethical (EA FF). Furthermore, this study also questions sociodemographic and purchase differences in consumers' ethical behavior, WTP FF and perception of EA FF.

From the above-mentioned questions and considering findings in previous research, the following hypotheses were set:

- H1 Consumers behave mostly ethically when buying, they perceive the characteristics of family farm products as ethical and are willing to pay more for them.
- H2 There is a positive correlation between EC, EA FF, WTP FF and the frequency of purchasing family farm products.
- H3 Consumers who frequently buy family farm products are willing to pay a price premium for those products. Sociodemographic differences in consumers' WTP FF are not expected.
- H4 Consumers who frequently buy family farm products perceive the characteristics of those products more ethically. Women, more than men, perceive that family farm products have ethical attributes.
- H5 Consumers who frequently buy family farm products behave more ethically when buying in general, than consumers who buy family farm products less frequently. There are no sociodemographic differences in consumers' ethical consumption behavior.

4. METHODS AND DATA

4.1. Sample

The sample consisted of 143 participants (67 men and 76 women). The age range of the participants was 20–71 (the average age was 37). The sociodemographic characteristics of the participants displayed that the participants were represented in all categories, except that there were no participants with lower than secondary education. On average, the participants were younger, employed, have graduated from college, lived in a larger city, had an average income, and bought family farm products several times a month. A detailed overview of the sample with the sociodemographic characteristics is shown in [Table 2](#).

4.2. Instruments

For this research, the *Ethical Consumer Behavior Scale* was used, which was translated into Croatian using the double translation method. It was constructed and validated by [Sudbury-Riley and Kohelbacher \(2016\)](#). They have adapted the items to the modern context because some of them (according to their content) were outdated. The scale consisted of 5 dimensions of ethical consumer behavior (ecological shopping, boycott of non-environmentally friendly products, recycling, boycott of socially irresponsible products and WTP a higher price for ethical products) and 10 items (two for each dimension). Validation was performed on a sample of participants from the UK, Germany, Hungary, and Japan. The scale showed good to excellent reliability on all tested samples (Cronbach's alpha was between 0.86 and 0.93).



Table 2. Descriptive data for sociodemographic features of consumers and frequency of buying family farms products

		<i>N</i>	Percentage	<i>M</i>	<i>SD</i>
Gender	M (2)	67	46.9		
	F (1)	76	53.1		
				0.53	0.50
Age	20–29 (1)	46	32.1		
	30–39 (2)	44	30.8		
	40–50 (3)	29	20.3		
	50 < (4)	24	16.8		
				2.22	1.08
Employment status	Employed (1)	102	71.3		
	Pensioner (2)	8	5.6		
	Student (3)	22	15.4		
	Unemployed (4)	11	7.7		
				1.59	1.00
Education level	High school (1)	37	25.9		
	Higher education (BA) (2)	25	17.5		
	Faculty degree (MA) (3)	74	51.7		
	Ph.D. (4)	7	4.9		
				2.36	0.92
Place of residence	Village (1)	13	9.1		
	Small town (2)	32	22.4		
	City (3)	98	68.5		
				2.59	0.65
Income €	< 433 (1)	16	11.2		
	433–666 (2)	26	18.2		
	667–933 (3)	37	25.8		
	934–1,333 (4)	35	24.5		
	1,333 < (5)	23	16.1		
	I don't want to answer (0)	6*	4.2		
				3.17	1.25

(continued)

Table 2. Continued

		<i>N</i>	Percentage	<i>M</i>	<i>SD</i>
Frequency of buying family farms products	Once per week (4)	28	19.6		
	A few times per month (3)	57	39.8		
	Once per month (2)	26	18.2		
	A few times per year (1)	29	20.3		
	I don't buy family farms products (0)	3 [*]	2.1		
				2.60	1.03

(* participants who are excluded from certain analyses due to insufficient number (*M* and *SD* are shown without those participants)).

Source: authors.

To examine the perception of the ethical attributes of the products of Croatian family farms, four items were constructed with a focus on environmentally-friendly and the local attributes of family farm products. Four items were constructed to examine the WTP price premium for family farms' products (see Appendix). All items in this study were Likert-type on a scale of 1–4 (1 = *strongly disagree*; 4 = *strongly agree*).

Sociodemographic characteristics asked from the participants were: age, gender, the highest level of completed education, place of residence, employment status and monthly income. Categories for monthly income were formed following the current situation of salary categories in Croatia. Participants were not obliged to answer this question. Participants also stated the frequency of buying family farms products.

4.3. Methodology

The survey was conducted online, via the Google Forms platform, in July 2020 due to the COVID-19 pandemic. The sampling method was convenient sampling. Participants were presented with research information and instructions on how to complete the survey. They were informed that the survey was anonymous and that the data would be used solely for research. Completing the survey took about 5 min.

In data processing, the statistical program IBM SPSS, version 25 was used. Factor analysis was performed for the scale used and a composite score variable of the analyzed items was constructed. After the analysis, separate composite score variables for the ethical characteristics of the family farm and for the WTP FF were also constructed on the items used to test the family farms, which were used in the further analysis. Later, correlations were calculated, and independent sample *t*-tests and one-way ANOVAs were performed. To determine if the assumption on the homogeneity of variance for *t*-test and ANOVAs was met, Leven's tests for homogeneity of variance before each test were performed. Leven's test measures whether the variances of the tested groups are significantly different. If the test is significant, then the variances are unequal and is not recommended to use these tests (Field 2009). For the post hoc test the Bonferroni test



was used. In addition to the main variables, sociodemographic characteristics of consumers were also included in the research.

In the first step, to explore the factorial structure of the *Ethical Consumer Behavior Scale*, all items were subjected to exploratory factor analysis (principal axis factoring) with an oblique oblimin rotation. To verify the sample adequacy for analysis, the Kaiser-Meyer-Olkin test ($KMO = 0.909$) and the Bartlett sphericity test ($\chi^2 = 800.16$, $df = 45$, $P < 0.001$) were performed and indicated that the correlation structure was adequate for factor analysis. According to the Kaiser-Guttman criterion, with Eigenvalues greater than 1, a one-factor solution is the best fit for the data, explaining 52.59% of the variance. Anticipating the five-factor structure of the Scale, as in the original scale, the analysis was performed again with five fixed factors. The explanation of variance increased to 68.23%; however, the resulting factor structure indicated a smaller number of factors and the need to exclude items due to low communalities and saturations on multiple factors, so the one-factor structure is used in further analysis. The one-factor structure also showed excellent internal consistency, Cronbach's alpha reliability coefficient was 0.92. The final structure of the *Scale* is presented in [Table 3](#).

Table 3. Factor matrix of Ethical Consumer Behavior Scale

Items	Factor 1	h^2
I have paid more for environmentally friendly products when there is a cheaper alternative.	0.81	0.65
I will not buy a product if I know that the company that sells it is socially irresponsible.	0.81	0.65
When there is a choice, I always choose the product that contributes to the least amount of environmental damage.	0.77	0.59
If I understand the potential damage to the environment that some products can cause, I do not purchase those products.	0.75	0.56
I have paid more for socially responsible products when there is a cheaper alternative.	0.75	0.56
I have switched products for environmental reasons.	0.73	0.53
I make every effort to buy paper products (toilet paper, tissues, etc.) made from recycled paper.	0.68	0.46
Whenever possible, I buy products packaged in reusable or recyclable containers.	0.68	0.46
I don't buy products from companies that exploit their employees or have poor working conditions.	0.64	0.41
I don't buy household products that harm the environment.	0.63	0.40
<i>Characteristic roots - total (h^2)</i>	5.26	5.26
<i>% of variance</i>	52.59	52.59

Source: authors.



In the next step, correlations and Cronbach's alpha reliability coefficients for constructed items measuring perception of ethical attributes and willingness to pay a price premium for family farm products were analyzed. The obtained results confirm that Pearson's correlation coefficients of all items are significant for willingness to pay the price premium, all items are positively correlated ($r = 0.30\text{--}0.67$, $P < 0.01$), and the Cronbach α for these items is 0.77. The highest correlation was between the item *Whenever I can buy family farm products even when their products are more expensive* and the item *I will pay a higher price for a family farm product, although there are cheaper alternatives* ($r = 0.67$, $P < 0.01$). In further analysis, willingness to pay is measured by a composite score of all items called *Willingness to Pay for Family Farm Products* (WTP FF).

Correlations and internal consistency were also examined for perceived attributes of family farm products. All correlations were found to be significant, and the items were positively correlated ($r = 0.34\text{--}0.64$, $P < 0.01$), and Cronbach's alpha reliability coefficient was 0.76. A composite score variable was also created to measure the perception of the ethical characteristics of family farm products called *Ethical Attributes of the Family Farm products* (AC FF).

5. RESULTS

5.1. Consumer ethics

To examine the first hypothesis and see if consumers in Croatia behave mostly ethically when buying, perceive the characteristics of family farm products as ethical and are willing to pay more, the descriptive data of measured variables is analyzed. According to the obtained results, presented in Table 4, when buying, consumers in Croatia behave mostly ethically, they are willing to pay a higher price for family farm products and perceive that these products have ethical attributes, which confirms hypothesis H1.

Family farm products are perceived to have ethical attributes (local and environmental) and consumers are willing to pay a price premium for those products, which is consistent with findings in previous research examining local and organic products (Naspetti – Bodini 2008; Berg – Preston 2017).

5.2. Relationship of measured constructs

Pearson's correlation coefficient is used to measure correlations. The correlations between all main variables (EC, WTP FF and EA FF), frequency of buying family products and socio-demographic characteristics of consumers are reported in Table 5.

Table 4. Descriptive data of measured constructs

Scale	Items	M	SD	Skewness	Kurtosis	Range	Cronbach α
Ethical consumer (EC)	10	27.49	6.73	−0.32	−0.37	10–40	0.92
WTP FF	4	12.03	2.57	−0.47	−0.08	4–16	0.77
Ethical attributes of Family Farm products (EA FF)	4	12.48	2.24	−0.47	−0.06	7–16	0.76

Source: authors.



Table 5. Correlation matrix of all measured variables

		1	2	3	4	5	6	7	8	9	10
1	EC	-	0.57**	0.46**	0.30**	-0.15	0.05	-0.24**	0.02	-0.07	0.14
2	WTP FF		-	0.45**	0.48**	-0.10	0.09	-0.14	-0.02	-0.11	0.15
3	EA FF			-	0.18*	-0.18*	-0.02	-0.10	-0.11	-0.09	-0.10
4	Frequency of buying FF				-	-0.09	0.20*	-0.16	0.04	-0.07	0.11
5	Gender					-	0.14	-0.11	0.02	0.15	0.21*
6	Age						-	-0.44*	-0.13	-0.01	0.35**
7	Employment							-	-0.19*	-0.07	-0.57**
8	Education								-	0.20*	0.23**
9	Residency									-	0.04
10	Income										-

EC - Ethical consumer; WTP FF- Willingness to pay price premium for family farm products; EA FF - Ethical attributes of family farm products; (* $P < 0.05$; ** $P < 0.01$).

The results show that all the main variables of this study are correlated significantly. The highest correlation is between the EC and the WTP FF (0.57). A moderate positive correlation is observed between EA FF and WTP FF (0.45), and EC (0.46). These results are consistent with previous research. A positive correlation is found between environmentally friendly products and willingness to pay higher prices for those products (Gregory-Smith et al. 2016). Frequency of buying FF correlated significantly with EC, WTP FF and EA FF, with low to medium ranking from $0.18 \leq r \leq 0.48$. The highest correlation is between WTP FF and frequency of buying FF (0.48), which is expected because consumers who frequently buy family farm products are willing to pay a price premium for them, and consumers who are willing to pay more are buying those products more frequently. Of all sociodemographic characteristics observed, gender, is negatively correlated with the EA FF (-0.18). A significant negative correlation between employment status and EC is also found (-0.24). Hypothesis H2 is therefore confirmed.

5.3. Differences in willingness to pay, perception of ethical attributes and ethical consumer behavior

To examine sociodemographic and purchase frequency differences in consumers' WTP a price premium for family farm products, ethical behavior, and perception of ethical attributes, *t*-test and ANOVA were used. Leven's tests for homogeneity of variance for all groups were observed and showed that there is no heteroscedasticity ($P > 0.05$). It was first examined if different groups of consumers – depending on their frequency of buying family farm products – were willing to pay a price premium for those products. The results of the ANOVA showed a significant effect of frequency of purchase FF on WTP FF in 4 groups ($F(3, 136) = 0.55, P < 0.01$). Post hoc comparison using the Bonferroni test indicated that the mean score for consumers who



buy family farm products once a week ($M = 13.32$, $SD = 1.74$) are significantly different from consumers who buy these once a month ($M = 11.04$, $SD = 0.46$) and several times per year ($M = 10.48$, $SD = 2.38$). No significant difference was found in the willingness to pay the price premium between those consumers who buy family farms once a week and several times per month ($M = 12.88$, $SD = 2.16$). Also, consumers who buy those products several times per month significantly differ from other consumer groups. No differences in willingness to pay the price premium were observed between the groups that buy once a month or less frequently. To summarize, the consumers who buy family farm products more frequently (several times per month or more often) are more willing to pay price premiums than consumers who buy family farm products less frequently. The t -test for the independent sample was used to identify if there is a gender difference between consumers in WTP FF. The results show there is no gender difference in WTP FF ($t(141) = 1.20$, $P > 0.05$). The ANOVA did not show a significant effect of age ($F(3, 139) = 0.83$, $P > 0.05$), education level ($F(3, 139) = 0.96$, $P > 0.05$), current employment status ($F(3, 139) = 1.40$, $P > 0.05$), places of residence ($F(2, 140) = 1.04$, $P > 0.05$) and income levels ($F(4, 132) = 1.07$, $P > 0.05$) on the willingness to pay a higher price for family farm products. These findings confirmed hypothesis H3.

Hypothesis H4 predicted that consumers who frequently buy family farm products perceive the characteristics of these products more ethically. The results of ANOVA show no significant effect of the frequency of purchase on the perception of ethical characteristics of family farm products ($F(3, 139) = 1.43$, $P > 0.05$), so the first part of the hypothesis was not confirmed. These results indicate that consumers perceive family farm products to have ethical attributes, and the frequency of buying those products has no effect on their perception. Analyses of variance did not show a significant effect of age ($F(3, 139) = 1.24$, $P > 0.05$), education level ($F(3, 139) = 1.03$, $P > 0.05$), current employment status ($F(3, 139) = 1.07$, $P > 0.05$), places of residence ($F(2, 140) = 2.87$, $P > 0.05$) and income levels ($F(4, 132) = 0.95$, $P > 0.05$) on AC FF. As predicted, the gender difference was found to be significant. Results of the t -test show significant differences between men ($M = 12.06$, $SD = 2.30$) and women ($M = 12.87$, $SD = 2.14$) in consumers' perception of ethical attributes ($t(141) = 2.18$, $P < 0.05$). The women perceive family farm products more ethically. This finding is consistent with findings in similar studies (Elliot 2013; Li-Wei 2014) and confirms the second part of the hypothesis.

The aim of this study was also to examine if consumers who frequently buy family farm products behave more ethically when buying in general, than consumers who buy those products less frequently, and to examine if there are sociodemographic differences in consumers' ethical consumption behavior. The effect of purchase frequency on ethical consumer behavior was found for 4 groups of consumers ($F(3, 136) = 4.78$, $P < 0.01$), confirming the first part of the hypothesis H5. Post hoc comparison using the Bonferroni test indicated that consumers who buy family farm products once a week ($M = 30.18$, $SD = 7.7$) are significantly different from consumers who buy these only once a month ($M = 24.96$, $SD = 6.74$) and several times per year ($M = 25.21$, $SD = 5.28$), but not significantly different from consumers who buy family farm products several times per month ($M = 28.68$, $SD = 6.17$). The difference between the consumers who buy once a month and less often was not significant. These results indicate that consumers who buy family farm products several times per month and more often, generally behave more ethically when buying. They are buying environmentally friendly products, buying products packaged in reusable or recyclable containers, boycotting products/companies that are socially or environmentally irresponsible, etc. Consumers who buy family farm products once a month or less frequently show these behaviors less often.



No significant gender difference was found in consumers' ethical behavior ($t(138) = 1.72$, $P > 0.05$) and no effect of the sociodemographic characteristics of consumers was found on their ethical behavior, except for employment status ($F(3, 139) = 3.38$, $P < 0.05$). The post hoc test indicates a significant difference only between employed consumers ($M = 28.27$, $SD = 0.65$) and the unemployed ($M = 21.91$, $SD = 6.73$) in ethical behavior. No significant difference in ethical behavior was found in the comparison of other groups (students ($M = 26.36$, $SD = 6.28$) and pensioners ($M = 8.25$, $SD = 7.00$)). The second part of the hypothesis was partially confirmed, but these results should be viewed with caution because the groups are not uniform.

6. CONCLUSIONS

This paper aimed to explore consumers' perception of family farm products, willingness to pay a price premium for those products, and if those products could be viewed as ethical goods because of their environmentally-friendly and local attributes.

The results show that Croatian consumers who participated in this research recognized the ethical characteristics of family farm products, and expressed their willingness to pay more for them. These findings could indicate that family farm products are perceived as ethical goods. Furthermore, the results could also indicate that the consumers who stated that they buy family farm products more frequently (several times per month or more often) are, not only more willing to pay a higher price, but behave more ethically when buying in general, than consumers who buy family farm products less frequently. A positive correlation between EC, EA FF and WTP FF was also found, giving additional insights into their relationship.

Although the paper assumed that different groups of consumers, regarding their frequency of buying family farm products, could perceive the attributes of family farm products differently, that difference was not found. This could indicate that consumers equally perceive family farm products to have ethical attributes, regardless of how frequently they buy those products (once a week or once a year). Also, women perceive family farm products more ethically than men.

These findings indicate that family farm products could be considered and included in the research of ethical goods.

Given that only the ethical characteristics of family farm products were examined, and no other ones, *future research* could examine whether consumers are willing to pay more for family farm products also because of other attributes, such as quality or availability of the products. Furthermore, it would be interesting to examine if customers perceive various ethical attributes of family farm products differently, and which specific attributes drive their willingness to pay a higher price. Results could also be checked using experimental methods.

A *certain limitation* of this research is the problem of generalization of results due to the relatively small sample, so it would be valuable to conduct similar research again on a larger sample to obtain additional validation of these findings. The limitation of the paper is also the correlation design in the part of the research, which makes it impossible to examine the causal relationships.

The *contribution of this research* is the inclusion of family farms in the ethical context with the analysis of their products as ethical goods. They were viewed through a new theory of ethical consumer demand, and the results confirmed the importance of these characteristics for which the consumers are willing to pay more. Also, this research is one of the first attempts to examine family farm products in this context in Croatia.



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Appendix

Statements on environmentally friendliness and the local attributes of family farm products.

- By purchasing family farm products, I contribute to the development of the local community.
- Family farm products are more environmentally friendly than the same products available in the stores.
- Family farms use fewer pesticides in production.
- During production, family farms pollute the environment less than other producers.

Statements on the WTP a price premium for family farms' products

- I will pay a higher price for a family farm product, although there are cheaper alternatives.
- I am willing to pay a higher price for a product just because it is produced by a family farm.
- I will pay a higher price for a local product rather than for a foreign one.
- Whenever I can, I buy family farm products, even when their products are more expensive.

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