



## **ECOLOGICAL TRAITS AND ORGANIC PRODUCTS CONSUMPTION BEHAVIOR OF OLDER ADOLESCENTS**

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### **Abstract**

This research determines and measures factors affecting the consumption of organic products among older adolescents in Lithuania. Previous studies discuss factors were grouped into personal and functional factors according to their impact on the attitude of ecologically conscious older adolescents. Personal factors are explained as the user's personal experience, internal qualities, and personality traits. The study showed that consumers' positive attitude towards organic products is shaped by consumers' personal motivation and available ecological knowledge. Consumers' ecological knowledge is also considered to be one of the essential factors in shaping the positive attitude of ecologically conscious consumers towards organic products. As society faces ecological challenges and searches for solutions to the problem, environmental friendliness and ecologically conscious consumers are increasingly emphasized. Consumers are encouraged to change their attitude towards organic products and to change their purchasing behaviour. However, it is noticeable that emphasizing ecological problems and increasing the assortment of organic products does not encourage consumers to change their consumption habits and purchasing behaviour, therefore, in order to understand what motivates consumers to use organic products, researchers began to analyse the factors that determine the consumption of organic products. Based on recent literature review in this area, three main factors were identified for detailed analysis in this research, which includes ecological awareness, ecological concern, and social norms of older adolescence in Lithuania. Based on the literature review discussion, this research formulates the following objectives and hypotheses for empirical analysis. Using a survey research methodology, data were collected from adolescence across Lithuania and 421 samples were finalized for analysis upon data cleaning and validation. Data was analysed using SPSS software for descriptive analysis and hypothesis testing. Result reveal that both ecological awareness and ecological concerns of older adolescents in Lithuania are strong predictors of their intention to purchase organic products. While personal norms though had some association in descriptive analysis with purchase behaviour, did not show statistical significance in impacting organic products purchase intention. Therefore, the concept of ecologically conscious adolescents consists of the consumer's ecological awareness, whereby the consumer evaluates his/her needs, behaviour and its impact on the environment when purchasing products. Based on this finding it can be stated that there is an influence of the attitudes of ecologically conscious consumers on their intention to buy organic products. Therefore, future researchers may focus more on understanding factors that contribute and promote the development of ecologically conscious consumers in the country. Also it is possible to look into consumer attitudes, how they are formed and what factors lead to the formation of positive consumer attitudes. KEY WORDS: Ecological awareness, ecological behaviour, sustainability.

### **Introduction**

In the last few decades, ecological sustainability, ecologically conscious and ecological attitude have become increasingly popular topics in the scientific literature (Štraupaitė, 2023; Çuhadar and Rudnak, 2022; Brochado et al., 2017; Dobson, 2010). As society faces ecological challenges and searches for solutions to the problem, environmental friendliness and ecologically conscious consumers are increasingly emphasized (Judson, 2015; Goncalves et al., 2015; MacLeod, 2021; Ferdig, 2004). Consumers are encouraged to change their attitude towards organic products and to change their purchasing behaviour (Pinto, et al., 2017). However, it is noticeable that emphasizing ecological problems and increasing the assortment of organic products does not encourage consumers to change their consumption habits and purchasing behaviour, therefore, in order to understand what motivates consumers to use organic products, researchers began to analyse the factors that determine the consumption of organic products (Onel, 2017; Chawla and Cushing, 2007). Research has shown that factors determining organic consumption shape consumer attitudes towards organic products (Bittar, 2017; Wei et al., 2018; Pata and Caglar, 2021) and the attitudes of environmentally conscious consumers influence purchase intention (Robinson, 2006; Trivedi et al., 2017; Cameron, 2022), which can directly influence

purchase behaviour (Martins et al., 2017, Pata and Caglar, 2021). In order to reveal what has a greater impact on the purchasing behaviour of an ecologically conscious consumer, a study was conducted to analyse the relationships between factors that may influence the formation of consumer attitudes, purchase intention and purchasing behaviour.

### **Literature review**

Bigoin et al. (2018) in a scientific study conducted that the attitudes and purchasing behaviour of ecologically conscious consumers are stimulated by different factors, but one of the most important factors that can determine the choice of ecological products is ecological packaging. Product packaging designers must educate consumers about their benefits and thus change consumer behaviour, in the case of green packaging (Mudacumura et al., 2006). Eco-friendly packaging encourages consumers to behave green and choose green products and creates the attitude that green-conscious consumer behaviour and green products can be common everyday goods (Goncalves et al., 2015; Naz, 2019).

Tan et al. (2016) examined the factors that can form a positive attitude of consumers towards organic products, organic consumption and purchasing behaviour. The study showed that consumers' positive attitude towards organic products is shaped by consumers' personal

motivation and available ecological knowledge. According to the authors (Kennedy, 2011; Gareiou et al., 2021; Drimili et al., 2020), the consumer's motivation comes from his connection with nature, ethical norms and beliefs that his behaviour can improve the ecological problems that have arisen. Consumers' ecological knowledge is also considered to be one of the essential factors in shaping the positive attitude of ecologically conscious consumers towards organic products (Drimili et al., 2020). Paul et al. (2015) in a research study reached similar conclusions as Tan et al. (2016) According to the authors, if consumers have formed a positive attitude towards organic products, it is likely that their intention to buy and purchasing behaviour will also be positive towards organic products.

To determine the relationship between purchase intention and purchase behaviour, researchers (Paul et al., 2015; Lorenz et al., 2018) explain using Fishbein and Ajzen's (Kotchen and Reiling, 2000) theory of Planned Behaviour. According to the authors (Lorenz et al., 2018; Dadvand et al., 2015), consumers who do not act impulsively and are guided by their positive subjective notions, knowledge and attitude will behave ecologically. The theory of planned behaviour shows that an individual's attitude, subjective norms and behavioural control influence primarily not the behaviour, but the intention to be-have.

Dewberry and Jackson's (2017) research results confirmed that the Theory of Planned Behaviour shows an individual's interest and potential future behaviour influenced by an individual's positive or negative attitude toward an object, which primarily affects the purchase intention of environmentally conscious consumers. In summary, it can be stated that the analysis of scientific literature sources has highlighted the following problematic area of research: although there is a lot of research on the attitude, intention to buy and purchasing behaviour of environmentally conscious consumers, there is a lack of in depth study of the consumer attitude, how it is formed, what factors determine the formation of a positive consumer attitude, how it determines the intention to buy organic products and purchasing behaviour (Colding and Barthel, 2017; Wilson, 2018). Research results also show different determinants of the consumption of organic products. It should be noted that it does not take into account at which stage of the organic consumption or purchasing behaviour the consumer loses interest in the organic product (Commoner, 2020; Ahmed et al., 2022). Previous studies have limitations including specific product categories, cultures, limited types of users were examined, which limits the use of the results. Hence this study seeks to clearly reveal what ecological factors determines the older adolescences' behaviour of purchasing organic products, by determining the attitude of environmentally conscious consumers.

## Research Objectives and Hypotheses

Based on the literature review discussion as above, this research formulates the following objectives and hypotheses for empirical analysis.

1. To assess the effect of older adolescents' ecological awareness and ecological concerns in determining their consumption of organic products.

2. To determine the effect of older adolescents' personal norms in determining their consumption of organic products.

### Hypothesis of the research

H1: Ecological awareness has positive association with consumption of organic products.

H2: Ecological concerns has positive association with consumption of organic products.

H3: Personal norms has positive association with consumption of organic products.

## Methodology

The purpose of the study is to determine the ecological traits of older adolescents in Lithuania and its association to the intention to purchase organic products. The links between attitude towards organic products and purchase behaviour are mostly emphasized, although it is believed that there are cases where a positive attitude towards organic products can have a greater effect on intention to buy organic products than on purchase behaviour. In order to determine the effect of the attitude of ecologically conscious consumers on the intention to purchase behaviour, a quantitative research method using a survey, was chosen. The survey method was chosen as the most widely used research method, which is more structured compared to the qualitative research method and has stricter sample calculation requirements that can ensure more accurate results. Via the survey 421 older adolescents participated in the study as respondents from all over the Lithuania. The finalized data was analysed using Statistical Package for the Social Sciences (SPSS) version 21 for descriptive analysis and hypotheses testing.

## Result and Discussion

The Cronbach Alpha measures the reliability and consistency of a Likert scale of the questionnaire. Table 1 illustrates the reliability statistics of all the factors affecting the purchase intention of organic food. The Cronbach's Alpha for all factors are above 0.8, therefore reliable for further statistical analysis.

**Table 1.** Result of Reliability Analysis

<b>Factors</b>	<b>Cronbach's Alpha</b>
Ecological Awareness	0.995
Ecological Concerns	0.992
Personal Norms	0.994
Purchase Intention	0.989

Subsequently, descriptive statistical analysis was carried out to the research factors. As we can see in fig. 1, the first factor consists of all the factors of ecological awareness and social norms, plus one personal values

variable and one personal norms variable. The personal values statement was “I follow the concept of sustainable consumption on a daily basis” (sorting, buying organic products, avoiding plastic bags), the respondent was able to associate sustainable consumption with ecological consciousness more than with his personal values. The personal norms statement was: “The organic products purchased by me have an impact on the preservation of the environment”, which was likely to be interpreted by the respondents as a factor of ecological consciousness, as it refers to the perception of purchasing organic products. By analysing older adolescents’ awareness, it is possible to see that they consider themselves an environmentally conscious consumer. Also, when they purchase products, they evaluate their environmental impact. Social norms and eco-awareness may also have seemed similar concepts to the consumer, as social norms also refer to awareness, but from the perspective of social groups.

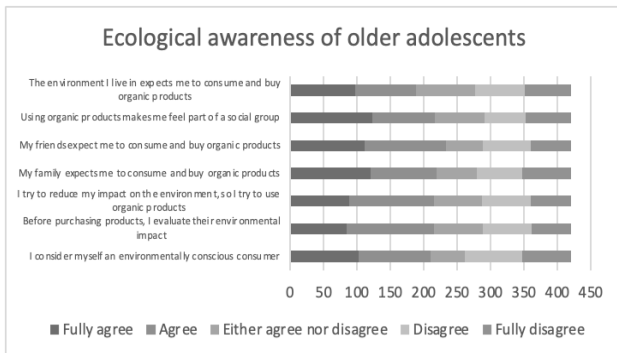


Fig. 1. Ecological awareness of older adolescents

The second factor consists of all the factors of ecological concern and two personality traits (fig. 2). The latter factors are likely to be attributed to ecological concern because the respondents interpreted the following statements: 'I trust products bearing the organic logo'; 'I feel socially responsible when I consume organic products' as ecological concern factors rather than personality traits'. Analysing the ecological concerns of older adolescents, it has shown that the most important that older adolescents are interested ecological problems and the consumption of organic products, and they are concerned about the environmental pollution caused by plastic packaging and concerned about environmental pollution in the world. Analysis shows that ecological concern factor is also a part of ecological awareness.

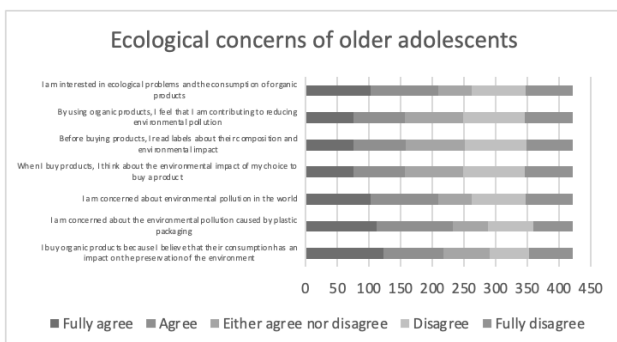


Fig. 2. Ecological concerns of older adolescents

The third factor consists of all the personal norms factors and the two personal values that respondents were asked to state: 'I care about reducing pollution' and 'I value organic and healthy products more than others' (fig. 3). It is likely that the respondents did not see a difference between the personal norms statements and the personality trait statements mentioned above when answering the questions. By analysing the results, it is possible to interpret that older adolescents feel socially responsible when using organic products. Older adolescents also trust food products marked with the EU organic production logo and associate them as having high quality and reliable.

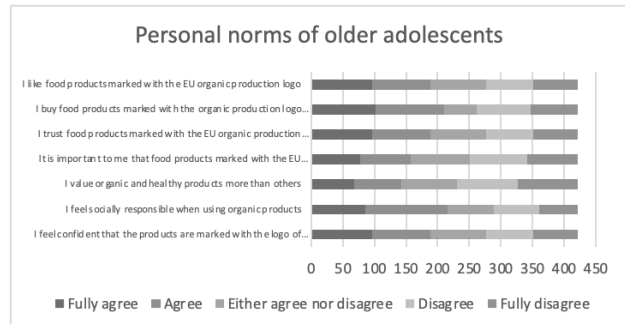


Fig. 3. Personal norms of older adolescents

Subsequently a Multiple Linear Regression (MLR) analysis was carried out in SPSS and the result is display as below in Table 2 and Table 3.

Table 2. Result of ANOVA from MLR

	Sum of		Mean		Sig.
	Sq.	df	Square	F	
<b>Regression</b>	799.27	3	266.426	74583	.000
<b>Residual</b>	1.490	417	.004		
<b>Total</b>	800.76	420			

Table 3: Result of Coefficients from MLR

	B	Std.		t	Sig.
		Error	Coeff. Beta		
<b>Const.</b>	.006	.007		.759	.449
<b>EA</b>	.550	.016	.558	34.913	<.001
<b>EC</b>	.452	.018	.451	25.401	<.001
<b>PN</b>	-.006	.020	-.006	-.323	.747

The results reveal a high R Square value of 0.9 and as table 2 shows, significant Anova test indicating model fit. Table 3 shows that both Ecological Awareness and Ecological concerns are significant predictors of purchase of organic products by Lithuanian older adolescents. Hence H1 and H2 are supported in this study. However, H3 (Personal Norms) is not statistically significant in impact toward purchase intention, hence H3 is not supported.

To sum up the result analysis, the first factor consists of ecological awareness measurement items and social norms. The second factor consists of ecological concerns measurement items and one item on ecological awareness. The third factor consists of personality traits, personal values and personal norms.

The data analysis show that the respondents did not distinguish between ecological awareness and social norms from the given statements, and it can be said that the social norms introduced in the Lithuanian population are equivalent to ecological awareness. Personality traits and values were equated by respondents with personal norms. Only one item of ecological awareness was identified by the respondents and was not mixed with other items, and only one item of ecological awareness was included in this group, which was identified as a variable of ecological concern. According to the MLR analysis, both Ecological Awareness and Ecological Concerns of respondents are found to be highly significant in predicting their purchase behaviour, while personal norm is not substantiated in this study as a determinant of purchase intention.

## Conclusion

An analysis of the concepts of ecologically aware consumers presented in the scientific literature suggests that the concept of eco-conscious consumers is not homogeneous and consists of several key factors influencing eco-conscious consumer behaviour (Agienko et al. 2017; Karatas, 2015). First of all, the concept of ecologically conscious adolescents consists of the consumer's ecological awareness, whereby the consumer evaluates his/her needs, behaviour and its impact on the environment when purchasing products. The concept of ecologically aware adolescents is also based on the consumer's intrinsic motivation, which explains the consumer's tendency to switch from conventional behaviour to eco-conscious purchasing behaviour. Thus, it can be argued that the concept of ecologically aware adolescents is not homogeneous but consists of the characteristics of an eco-conscious consumer, eco-awareness, intrinsic motivation and the theory of planned behaviour.

The attitudes of ecologically aware adolescents are influenced by personal factors (eco-concerns, eco-consciousness, social and personal norms, personal values, personality traits) and functional factors (influence of social groups, price of eco-products, packaging of eco-products, eco-awareness) (Mayer and Frantz, 2014). It also reveals that the attitudes of environmentally conscious consumers influence purchasing behaviour and that intention to buy influences purchasing behaviour. This empirical study shows that functional factors have a greater impact on the attitudes of environmentally conscious adolescents towards organic food products than personal factors. Based on the findings of the study, it is recommended to develop deeper understanding of what constitutes ecological awareness and ecological concerns of the society, which could stimulate the consumption of organic products.

## Limitation of Study

The limitation of this study is that the data is limited to Lithuanian older adolescents. A broader picture of organic purchasing behaviour could have been obtained by surveying different age groups and neighbouring countries. In order to make the results more representative, it would be possible to survey respondents in other foreign countries which are more advanced in the consumption of organic products. In this way, it would be possible to assess the impact of the attitudes of ecologically aware consumers on their intention to buy and their purchasing behaviour on the Lithuanian market and on markets in other neighbouring countries, especially Baltic countries. The results could be compared to assess how the attitudes of ecologically aware consumers in different countries affect their organic products purchasing behaviour.

## Further research

Further studies may look at other variables that may influence aspects of ecological behaviour. Given the importance of the issue, different socio-economic factors can be taken into account in addition to cultural factors. Further research could look into consumer attitudes, how they are formed, what factors lead to the formation of positive consumer attitudes, how they determine the intention to buy organic products.

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RECEIVED: August 28 2023

ACCEPTED: September 10 2023

PUBLISHED: October 06 2023

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