Young and Green" A Study of Consumers' Perceptions and Reported Purchasing Behaviour towards Organic Food in Poland and the United Kingdom	1 2
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Abstract: Globally, the organic food market is the most successful green market. Young consumers, the decision-makers of the future, are perceived as being more environmentally concerned than older cohorts. The aim of this study was to consider young consumers' attitudes and behaviours concerning organic food, where the organic food market in the UK is more mature than in Poland. Empirical research was conducted using a web-based survey questionnaire (CAWI) with consumers ($n = 973$) in both countries. The associations between four constructs (general pro-social attitudes, green consumption values, receptivity to green communication, and buying behaviour) were considered using CB-SEM. We extended the model with two new constructs to explain young consumers' purchases of organic food. UK respondents are significantly more conscious green consumers with higher environmental attitude intensity than Polish residents. Intensity of pro-environmental attitudes are significantly more likely to choose organic food. Perception of organic food influences purchases only in Poland. The components of pro-environmental attitudes and perception of organic food alone do not explain the variability in behaviour, despite a good fit of the model. This suggests that other independent variables may be of influence.	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
Keywords: young consumers; pro-environmental attitudes; sustainable consumption; organic food; antecedents of green consumption	36 37 38 39

1. Introduction

In the Anthropocene, a geological epoch, the resource-intensive lifestyle of consumers, 43 consumption-related choices, and behaviour have been recognised as key drivers of 44 environmental degradation and unsustainable development [1–4]. Unsustainable development 45 practices have resulted in global environmental changes, including poorly planned urbanisation, 46 climate change, deforestation, changes in hydrological systems, land degradation, ecosystem 47 impairment, and loss of biodiversity [5-9]. These changes have had a tremendous impact on 48 ecosystem health and the physical and mental health of global society, affecting the well-being 49 of people [10] and their economies. 50

Since the United Nations (UN) Earth Summit in Rio de Janeiro in 1992, numerous governments, multilateral non-government organisations, and scientific societies have sought to facilitate less resource-intensive personal consumption and to ensure prosperity but not exceeding planetary boundaries [11]. Agenda 21 indicated that "[w]hile poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialised countries, which is a matter of grave concern, aggravating poverty and imbalances" [12].

Food systems, considered as all elements and activities that relate to production, processing, 60 distribution, preparation, and consumption of food, support human health and environmental 61 sustainability [13,14]. However, they create the largest, human-related pressure on Earth [14]. 62 The objective of the UN Sustainable Development Goal (SDG) 12 is to "ensure sustainable 63 consumption and production patterns", which means that consumers should shift to nutritious 64 and safe diets with a lower environmental footprint. In addition, producers need to grow more 65 food for an expanding global population, while reducing negative environmental impacts 66 [15]—a tall order. This transition to healthy and sustainable diets, involving multiple 67 stakeholders including consumers, is necessary for achieving the UN SDGs which seek to 68 eliminate poverty, hunger, and malnourishment and to safeguard the planet and ensure social 69 and economic well-being for all [14]. 70

One option for more sustainable food production is organic production, described in Regulation 72 (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic 73 production and labelling of organic products and repealing Council Regulation (EC) No. 74 834/2007 [16] as 75

"a sustainable management system consisting of the production of a wide variety of high-

quality food and other agricultural and aquaculture products that respond to consumers' demand for goods that are produced by the use of processes that do not harm the environment, human health, plant health or animal health and welfare."

Organic production was the focus of this research, including its relevance to young consumers as an option for demonstrating sustainable consumption when considering food. Young

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consumers are of particular relevance for sustainable consumption researchers, policymakers, 83 and educators since the spending power of this group is rapidly expanding, and as a result, the 84 potential for positive sustainability impacts resulting from their consumption choices is also 85 expanding [2]. Generation Z (Gen Z) is the consumer group with the greatest spending power 86 [17,18]. However, as far as the number of consumers is concerned, Generation Y (Gen Y) is 87 the most numerous [19]. The Pew Research Center considers anyone born between 1981 and 88 1996 as a Millennial or part of Gen Y (also referred to as the Net Generation, Generation Next, 89 Millennials, Trophy Kids, Generation www, or Echo Boomers). Anyone born from 1997 90 onward is identified as a member of Gen Z (also known as the Post-Millennials, Gen Z, Gen 91 Zets, iGen, Centennials, Homelanders, Zoomers, Children of Internet, Media Generation, .com 92 Generation, Google Generation, iGen, or Instant Online) [20–23]. 93

Gen Y and Gen Z consumers are tech-savvy and constantly digitally connected. Additionally, 95 the use of electronic word-of-mouth and social media has influenced their buying behaviour 96 [17,24]. Young consumers, as natives in a globalised digital world, are similarly conditioned 97 across cultures, nationalities, and ethnicities, but their consumption-related behaviours are at the same time impacted by different cultural, historical, and individual situations [25]. This 99 literature frames the empirical study. The general research question considered in this study was:

Are there differences between young consumers' attitudes and behaviour concerning organic food in Poland and the UK?

There are diverse theories, models, and frameworks which help understanding of green 106 consumer behaviour, focusing on the value-attitudes/norms-intentions-behaviour hierarchy, 107 including the theory of planned behaviour (TPB) [26,27], theory of reasoned action (TRA) [28], 108 and the ecologically conscious consumer behaviour (ECCB) models [29]. Nonetheless, value-109 belief-norm (VBN) theory [30], rather than the TRA [28] or TPB [27], may be more useful to 110 researchers seeking to explain green behaviour because the VBN considers both altruistic 111 and/or rational value-driven beliefs and norms [31]. The VBN proposes that consumers' 112 environmental behaviours are determined by a combination of moralistic (altruistic) or personal 113 (economic or social) values and norms [31]. Do Paço et al. [32] position a model of green 114 consumer behaviour that integrates social concerns and attitudes as well as external influences 115 (the influence of green marketing). Using a questionnaire on-line survey, this study examined 116 links between constructs to first test the model of do Paço et al. [32] for young consumers from 117 the UK and Poland in order to evaluate its applicability in different generational cohorts and 118 countries. Second, this research intended to expand the prevailing model of green consumer 119 behaviour through examining both the direct and indirect impact of modelling constructs 120 (general pro-social attitudes, green consumption values, receptivity to green communication, 121 buying behaviour) on the perception of organic food and purchasing behaviour in the organic 122 food market. 123

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The empirical research following questionnaire design was exploratory in nature, and therefore, 125 research questions rather than research hypotheses were formulated. 126 127 RQ1: Is the scale verifying the intensity of pro-environmental attitudes equally valid for Polish 128 and UK sample cohorts? 129 RQ2: As the UK has a more mature organic food market, are there greater pro-environmental 130 attitudes shown in the UK compared with Poland? 131 RQ3: Do pro-environmental attitudes influence the choice of organic food? 132 RQ4: Does the perception of organic food influence the choice of organic food? 133 134

2. Literature Review

Organic foods can be defined as foods grown with the aim of conserving soil, water, and air 137 and minimizing environmental impact. The use of synthetic fertilisers and chemical crop 138 protection products, prophylactic use of antibiotics, use of genetically modified organisms 139 (GMOs), or ionising radiation are prohibited [33-35]. However, some authors claim that the 140 ecological benefits of organic farming are only partly beneficial, as more land is required for 141 the same net output because of lower yields [36-41]. Organic agriculture may be "less 142 polluting" but only in terms of per unit of land, but not per unit of output [42]. While Meemken 143 and Qaim [42] (p. 39) claim that "organic farming is not the paradigm for sustainable agriculture 144 and food security", the International Federation of Organic Agriculture Movements (IFOAM) 145 asserts that organic agriculture contributes to achieving numerous SDGs by ensuring (i) healthy 146 lives and promoting well-being; (ii) availability and sustainable management of water; and (iii) 147 protection, restoration, and promotion of sustainable land management and preservation of 148 biodiversity [43]. 149

There are several studies based on life cycle assessment (LCA) analysis seeking to assess the 151 environmental impact of food consumption and proposing the most effective ways to reduce 152 impact through minimising meat consumption, refusing air-transported food, and preferring 153 organic products [36,44]. Seufert, Ramankutty, and Mayerhofer [45] advocate increasing 154 emphasis on environmental best management practices in organic regulations across the world 155 (including leguminous crops in rotations, the use of cover crops, plant diversification schemes, 156 improving genetic diversity in crops, the use of conservation tillage, and greater integration of 157 mixed farming systems (crops and livestock)). Delivering environmental sustainability with 158 regard to the atmosphere, water, and soil can be achieved only if a sustainable pattern of 159 production (sources) and consumption (sinks) is maintained [46]. 160

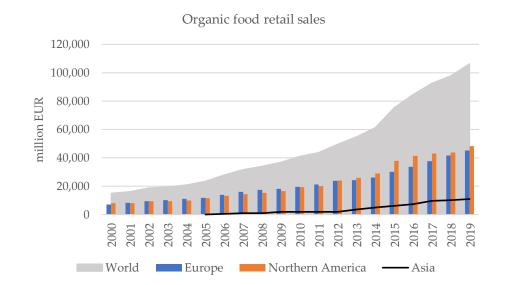
The evolution of consumers' concerns towards the environment has fostered the development 162 of a green products market, especially in the United States (US) and Germany [47,48], which 163 is seen as a proxy for green food production. These two countries had the largest organic 164

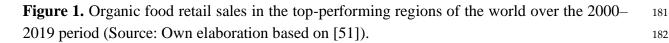
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markets worldwide in 2019 and for several preceding years. The US organic market in 2019 165 was EUR 44.7 billion, representing 42% of the global organic food market; and the German 166 organic market was EUR 12.0 billion, representing 11% of the global organic food market [49] 167 (p. 22). Thøgersen [50] rightly emphasized that the "organic food market is probably the most 168 successful green market worldwide". The global market for organic foods expanded over 7-169 fold between 2000 and 2019; the compound annual growth rate (CAGR) of global organic retail 170 sales within the studied period was 7.7%, with global retail sales reaching EUR 106.4 billion 171 in 2019 [51]. Over the past twenty years, the market for organic foods has centred on North 172 America and Europe (Figure 1). Indeed, the two regions comprised 87.6% of global organic 173 retail sales in 2019. However, over the past fifteen years, the demand for organic food has been 174 rapidly growing in Asian countries, in China in particular [52]. China was the fourth largest 175 single market for organic foods in 2019 with retail sales of EUR 8.5 billion, after France (EUR 176 11.3 billion) [49] (p. 22). 177





2.1. Explaining Green Buying Behaviour

The green consumer is defined as an individual who purchases products with the aim of 185 minimising harm to the environment [52]. The phenomenon of green consumption must be 186 considered within the wider range of terms, including sustainable consumption, ethical 187 consumption, moral consumption, and anti-consumption [53]. Sustainable consumption 188 behaviour includes actions such as purchasing sustainable and fair trade goods (including 189 energy-efficient appliances, products packaged in reusable containers, biodegradable products, 190 commodities made with recycled materials, products that are not tested on animals, durable 191 products, and organic food), separating and recycling household waste, adopting a voluntary 192

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simplified lifestyle, switching to less environmentally impactful transport modes, investing in 193 sustainable funds, etc. [1,32,54–56].

Even though the green purchasing behaviour of consumers is related to meeting both basic and 196 higher needs, it is essential for sustainable development to improve the green attributes of food 197 and other consumer goods [57]. Engaging in green consumption provides a dual benefit of 198 consumers' improved health and the opportunity to contribute to environmental sustainability 199 [58]. The theoretical model used in this study is based on a set of buying behaviour 200 antecedents-namely, the general pro-social attitudes (the tendency of individuals to consider 201 the rights and obligations and the wellbeing of others, i.e., to feel empathy), green consumption 202 values (the tendency to prioritise environmental outcomes via purchasing and consumption 203 behaviour), and receptivity to green communication (the attention paid to, or feelings about, 204 green messaging and advertising) which contribute to *buying behaviour* [see 32]. 205

General pro-social attitudes

Consumers are regarded as the key to sustainable development since their behaviours affect the 209 way companies operate [59]. Spielmann [60] (p. 1) indicates that "a common explanation for 210 the growth of green consumption is the positive social and moral standards that it represents: 211 doing what is best for the greater good, making the world a better place for tomorrow, etc.". 212 Some consumers have an intrinsic motivation (called warm glow) to act or respond 213 altruistically, i.e., pro-socially or pro-environmentally, where there is an association with the 214 purchase of multiple sustainable products [60]. Do Paço et al. [32] adapted the general pro-215 social attitudes scale from Osgood and Muraven [61] due to its focus on altruistic behaviours 216 commonly linked with environmental factors. 217

A crucial reason why people purchase organic food is a belief that food choice has 219 environmental and ethical implications [62–66]. Environmental concern, defined as consumers' 220 recognition of ecological problems and readiness to solve them, has been recognised as an 221 important motivating factor and driver of positive consumer attitudes towards organic food 222 [48,67]. Since concern for the environment generates benefits for the entire society, 223 environmental motives that influence organic consumers can constitute altruistic factors, 224 orienting attitudes towards organic purchases [68]. 225

Green consumption values

Biswas and Roy [69] studied across consumer cohorts the impact of consumption values (functional value, social value, environmental value, conditional value, and knowledge value) 230 on sustainable consumption behaviour. The results of the research supported the hypothesis that 231 there is an association between sustainable consumption behaviour and consumer 232 environmental values. Green consumption values and consumer attitudes towards sustainable 233 food logistics influence green purchase intention and motivate environmentally conscious 234

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behaviour [70]. Green consumption values inform greater preference for green products, but235this is mediated by factors such as aesthetic appeal [71]. Do Paço et al. [32] applied the green236consumption values scale developed by Haws et al. [71], examining how consumers' green237consumption values affect consumer' responses to environmentally based marketing.238

Receptivity to green communication

Green marketing consists of "actions directed to all consumers and incorporates a broad range 242 of marketing activities (e.g., price, planning, process, production, promotion, and people) 243 designed to demonstrate the firm's goal of minimising the environmental impact of its products 244 and services" [72] (p. 1850). Green marketing contains a promise of delivering both commercial 245 and environmental sector benefits. Green advertising, a crucial aspect of green marketing, 246 promotes aspects of greenness associated with products or services [73], but the degree of 247 consumer engagement can vary [74–76]. Furthermore, functional green advertising appeals 248 (based on providing information about relative environmental benefits that a brand offers as 249 compared to its non-green competitors) should be more effective for technology-intensive 250 products, and emotional green advertising appeals (based on emotional benefits such as 251 customers' feeling of well-being (warm glow) associated with acting in an altruistic way) 252 should be more effective for technological non-intensive products [77]. 253

Labelling on packaging is an important marketing tool used to inform consumers about the 255 nature of green products. In environmental consumerism, labelling is effective in stimulating 256 positive pro-environmental attitudes and in fostering the selection of green products over 257 conventional ones [78,79]. Even though labels can be effective in engaging consumers who 258 have little concern about the environment, they lose their effect when the environmental 259 concern is already high [78]. Furthermore, external influences that have an impact on 260 stakeholders' perceptions of corporate environmental responsibility include greenwashing 261 practices, the misleading communication practice associated with environmental issues [80]. 262 To access receptivity to green communication, do Paço et al. [32] applied the scale developed 263 by Bailey et al. [75]. 264

Buying behaviour

The fourth construct in the model utilised in this study was green buying behaviour, which 268 includes enacting sustainable consumption practices, such as increasing spending on green 269 products and supporting green companies [32,81]. Green consumers may be influenced by other 270 factors too, including the range of green products offered, the availability and validity of 271 information, and communication and claims made that are associated with the product [32]. In 272 this regard, we share the view of Thamthanakoon et al. [82] who claim that "past behaviour 273 exerts influence on intention indirectly, through the outcomes of the appraisal of the channel 274 used, typically including attitude toward and trust in the channel" (p. 4). To access buying 275

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behaviour, do Paço et al. [32] applied ten items from the ECCB scale [29] covering issues such as right packaging, polluting, or recycling.

2.2. Organic Food Buying Behaviour: Antecedents and Outcomes

Buying behaviour is now considered with a focus on organic food. The European average per 280 capita spend on organic food was EUR 55.8 in 2019 and varied from country to country (Figure 281 2). In 2019, organic food purchases were the highest in terms of per person spending in 282 Denmark, Switzerland, Luxemburg, Austria, and Sweden with EUR 214-344 spent per person 283 per year [51]. The consumer spending on organic food in the UK increased by 25% in the last 284 decade but remained below the European average at EUR 39 per capita in 2019 [51]. Eastern 285 European countries showed the lowest spending on organic food, with Poland having per capita 286 spend of EUR 8 in 2019 (compared with EUR 2 in 2010). This highlights that, although the UK 287 has a well-established organic market, UK and Polish consumers are "reticent purchasers" 288 amongst the European population, making them worthy of study. 289

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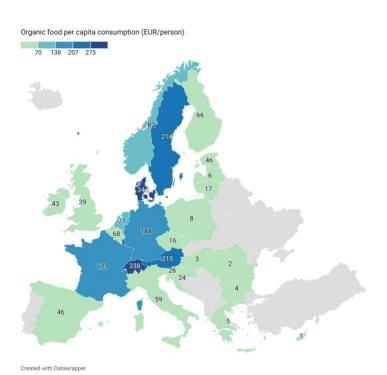


Figure 2. A per capita spending on organic food in selected European countries in 2019292(Source: own elaboration based on [51]).293

The barriers to the development of the organic food market appear to vary across the world, 295 stemming from historical, cultural, political, social, and economic issues. Rana and Paul [48] 296 reviewed and interpreted 146 research articles published in the 1985–2015 time period in 297 English which were either listed in the Social Science Citation Index or in Scopus in order to 298 consider the headline factors influencing the transition in consumer attitudes towards organic 299 food. Based on this systematic literature review, the important factors that were determined as 300 affecting attitudes and demand for organic food are: accessibility/ease of purchase, animal 301 welfare, consumer trust in labelling and certification, economic acquirability of organic food, 302 environmental considerations, ethical commitment, fashion, food habits and lifestyle of 303 consumers, having young children, health consciousness, household disposable income, 304 knowledge of the organic production method, marital status, price of organic food compared 305 with conventional food, quality and safety issues, and supporting local agriculture. 306

Kushwah, Dhir, Sagar, and Gupta [83] stated in their review article that across cultures most of 308 the barriers to organic food consumption were common, i.e., limited visibility, trust, choice, 309 availability, knowledge and information, convenience, higher price, sensory cues, scepticism, 310 and doubts concerning labelling and certification. A survey of 1000 Polish consumers identified 311 the key barriers to growth in the organic food market as high prices, then insufficient consumer 312 knowledge and low product availability [84]. However, recent marketing research conducted 313 in Czech Republic in 2019 showed that price was no longer a decisive factor for the purchase 314 of organic food [85]. Massey, O'Cass, and Otahal [86] categorised factors motivating the 315 purchase of organic food through aligning them with credence attributes (intrinsic-health, 316 quality, safety, nutritional aspects and extrinsic-environmental impact, animal welfare, and 317 production standards), search attributes (price, availability, and appearance), and experience 318 attributes (organoleptic factors). Credence attributes cannot be assessed or determined by the 319 consumer in the purchasing, preparation, or consumption phase, but they are important in the 320 consumer's purchase decision-making [87]. Consumers give high importance to the search and 321 experience attributes [86], which can be discovered prior and after consumption, and they make 322 repeat purchases of food products connected with good experiences over time. Thus, past 323 consumption drives consumer attitudes towards organic food purchase intention [88]. 324

Health of individuals and of their families is a second major factor that influences organic food 326 purchase decisions and willingness to pay (WTP) for food certified as organic [37,66,89–92]. 327 Health consciousness can be regarded as a more egoistic motivation determining organic food 328 behaviour because it mainly benefits the individual [93]. Numerous studies indicate that organic 329 food is healthier compared with conventional food due to the overall composition, including 330 the nutrient content of the food and maximum tolerance level of certain contaminants [94,95]. 331 The effect of various factors should be considered when evaluating the health outcomes of 332 people consuming organic food, e.g., healthier lifestyle [94]. However, a direct cause-effect 333 relationship between organic food consumption and consumers' health is still under debate 334 [96,97]. The methodology is now discussed. 335

3. Materials and Methods

The study presented herein is a part of a project supported by the National Science Centre, 339 Poland, under grant no. 2019/35/D/HS4/00801 titled "The effect of demand uncertainty in 340 supply chain modelling with emphasis on additive uncertainty". The quantitative research was 341 carried out using a web-based survey questionnaire (CAWI) on a total sample of 973 individuals 342

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from Gen Z (18–23 years of age) and Gen Y (24–39 years of age), among consumers who were 343 either Polish or UK residents. Young adults were selected for this in-depth analysis as youth 344 are perceived as being more concerned about current environmental issues than older cohorts 345 [98,99]; hence, considering their ability to make informed choices of eco-friendly products is 346 of interest. Furthermore, young consumers, born after 1981, are the decision makers of the 347 future who make up the largest proportion of registered voters in many countries [98]. 348

Data collection was conducted through a survey in two culturally and socioeconomically 350 distinct countries, i.e., Poland and the UK, to examine the applicability of the do Paço et al. 351 [32] model to carry out an in-depth analysis of young and green consumers' perception and 352 reported purchases of organic food. The survey was conducted in two languages, Polish and 353 English, depending on the respondents' country of residence, between December 2020 and 354 February 2021, i.e., during the COVID-19 pandemic and under relatively deep lockdowns in 355 both countries. The questionnaire was approved by the Research Ethics Committee at UMCS 356 (Poland) and the Royal Agricultural University Ethics Committee (UK) in November 2020. 357 The average completion time was 16 min 38 s. All respondents participated in the study on a 358 voluntary basis. A prerequisite for successful recruitment was to belong to Gen Y or Gen Z. 359 The link to the questionnaire was primarily disseminated among the students of all five state 360 universities in Lublin (Poland) and in the UK, via a snowball process. The completion rate for 361 the questionnaire was 55% (3004 participants opened the first page of the survey questionnaire). 362 Although the sample selection was non-random, most of the variables used in the analysis 363 showed ex post randomness based on a series test. The analysis showed that only single survey 364 items in both the Polish and UK sample did not show the nature of a random sample. 365

The questionnaire comprised 37 specific questions grouped into four sections on shopping habits relating to organic food (together with reasons for the lack of interest in organic food), genception of nine different types of food (including organic food), pro-environmental attitudes intensity, and demographic questions. The fully completed questionnaires and the questionnaires with rare missing data were included. The averages of all observations for a particular variable filled blank cells. This approach was followed by [100–102]. 367

The scale proposed by do Paço et al. [32], containing 31 items grouped into four previously described dimensions (latent variables), was used in this study to measure the intensity of proenvironmental attitudes of young residents of Poland and the UK. In this study, scale items were verified on a 5-point Likert scale (a 7-point Likert scale was used in the original study by do Paço et al. [32]). All dimensions achieved the required reliability. We based the verification of RQ1 on structural equation modelling (SEM) (IBM AMOS 27), while with RQ2 by comparing the average intensity of attitudes in both national groups. 374

We also used SEM to verify RQ3 and RQ4. More precisely, we extended the do Paço et al. [32] 382 model by adding to this model two latent variables (organic food perception and organic food 383 purchase). The verification of RQ3 and RQ4 was completed on the basis of our research 384

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questionnaire. The scale measuring organic food perception consisted of six variables in the format of a unipolar semantic scale and verified the perception of the following aspects: 386 healthiness (unhealthy–healthy), trustworthiness (untrustworthy–trustworthy), quality (not 387 good quality–good quality), control system (not strictly controlled–strictly controlled), 388 authenticity (inauthentic–authentic), and safety (not safe–safe). The other two variables used in 389 the study, affordability and availability, formed a separate aspect of this perception and were 390 therefore excluded. 391

The organic food purchase construct was created from two variables: reported organic food 393 purchases (dichotomy scale—buys/does not buy) and reported organic food purchase frequency 394 (an index counting the frequency of purchase of each of the 19 organic product categories). We 395 asked the respondents about the frequency of purchase of organic food products from three 396 categories, i.e., virtue products ("shoulds"), including dairy products, fresh fruit and vegetables, 397 bread, eggs, groats, olive oil, frozen fruit and vegetables; vice products ("wants"), including 398 chocolate, cookies and pastries, wine, beer, crisps and salty biscuits, sweets and candy, soft 399 drinks; and neither vice nor virtue organic food products, including butter and margarine, meat 400 and meat preparations, rice, pasta, coffee or tea [103]. 401

The Polish and UK sample sizes were different; however, direct comparisons were considered 403 valid see [104]. The Polish sample (PL sample) was assumed to be the main research group, 404 and the UK sample was mainly a replication of the sample for the model of do Paço et al. [32] 405 (questionnaires administered to the UK sample and those used by do Paço et al. [32] were drawn 406 up in English). Table 1 presents the structure of both samples. The demographic profile of the 407 consumers surveyed shows that women outnumbered men in both samples. About two-thirds 408 of participants residing in Poland were members of Gen Z, whereas over 60% of respondents 409 from the UK were members of Gen Y. Many more of the respondents surveyed in the UK did 410 not describe themselves as British than the equivalent in the Polish cohort, which is justified by 411 the fact that foreign residents form a much larger group within the UK population (9%) [105] 412 than within Polish society (0.9%) [106]. 413

Table 1. Demographic characteristics of the investigated samples.

		PL sample	UK sample
Research sample	Ν	812	161
Gender	Female	72.5%	75%
	Male	27.5%	25%
1 ~~~	Generation Y	33.9%	62.1%
Age	Generation Z	66.1%	37.9%
	Lublin/Cirencester	39.8%	19.9%
Place of residence	Other town in PL/UK	58.7%	68.3%
	Other town outside PL/UK	1.5%	11.8%
Nationality	Polish/British	93.7%	65.2%
	Other	6.3%	34.8%

Source: Own research.

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4. Results

417 The study verified whether the scale's dimensionality was identical to the research of do Paço 418 et al. [32] concerning the language-adapted version (Polish) and the original version used in the 419 UK research. Exploratory factor analysis (principal components method with varimax rotation 420 with Kaiser normalisation) was carried out. It revealed that five factors were valid in the sample 421 (64.2% of the variance was explained). Two statements (B1—"I try to buy energy-efficient 422 products" and appliances and B10—"I buy high-efficiency light bulbs to save energy") formed 423 a separate dimension in both groups. Consequently, a decision was made to exclude them from 424 further analyses. The PCA results were confirmed by the confirmatory factor analysis (CFA). 425 At the same time, it was noted that loadings for certain items in the PCA analysis (Table 2) 426 were lower than the required 0.7 (especially for V4—"I am concerned about wasting the 427 resources of our planet" and B6--"I use environmentally friendly soaps and detergents"). 428 However, these statements were considered important for further analysis; thus, they were 429 retained. The reliability of the whole scale was very good. Cronbach's alpha for the whole scale 430 was 0.948 (0.946 in the Polish sample and 0.945 in the British one). Reliability for individual 431 dimensions is presented in Table 2. 432

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		PCA's Loadin	igs	Scale Reliabi (Cronb Alpha)	oach's
Variable		PL	UK	PL	UK
. <u> </u>	General pro-social attitudes			0.4	
A1	It is important that others are happy.	0.736	0.704	0.904	0.924
A2	It is important to help someone who needs it.	0.64	0.762		
A3	I want to help others.	0.614	0.8		
A4	The well-being of others is important.	0.735	0.742		
A5	The needs of others are important.	0.662	0.809		
<u>A6</u>	It is important that all people are happy.	0.685	0.694		
	Green consumption values			0.005	0.072
V1	It is important to me that the products I use do not harm the environment.	0.64	0.715	0.885	0.872
	I consider the potential environmental impact of my actions				
V2	when making many of my decisions.	0.705	0.756		
	My purchase habits are affected by my concern for our				
V3	environment.	0.678	0.698		
V4	I am concerned about wasting the resources of our planet.	0.59	0.489		
V5	I would describe myself as environmentally responsible.	0.622	0.688		
	I am willing to be inconvenienced in order to take actions that				
V6	are more environmentally friendly.	0.575	0.657		
	Receptivity to green communication				
C1	I support brands that support the environment.	0.6	0.612	0.932	0.937
	I tend to pay attention to advertising messages that talk about the	0.707	0.703		
C2	environment.	0.707	0.705		
C3	The use of green messages in ads affects my attitude toward the	0.642	0.631		
CS	ads.	0.042	0.031		
C4	I respond favourably to brands that use green messages in their	0.706	0.808		
C4	advertising.	0.700	0.000		
C5	I am the kind of consumer who responds favourably when	0.695	0.835		
	brands use green messages in their ads.				
C6	I think that green advertising is valuable.	0.721	0.746		
C7	Green advertising is a necessary form of advertising.	0.651	0.637		
C8	I am the kind of consumer who is willing to purchase products	0.577	0.647		
	marketed as being green.				
<u>C9</u>	I tend to pay attention to green advertising messages.	0.697	0.742		
	Buying behaviour	0.750	0.565	0.00	0.001
	I try to buy energy-efficient products and appliances.	0.759	0.565	0.89	0.891
B2	I avoid buying products that have excessive packaging.	0.536	0.618	(0.886	
B3	When there is a choice, I choose the product that causes the least	0.616	0.621	after	after pexclusio
D 4	pollution.		0.700		n of B1
B4	I have switched products/brands for ecological reasons.	0.635	0.708	and	
B5	I make every effort to buy paper products made from recycled	0.651	0.589	anu	and
	paper.				

Table 2. Factor validity and reliability of the pro-environmental attitudes scale.

B6	I use environmentally friendly soaps and detergents.	0.522	0.444	B10	B10
B7	I have convinced members of my family or friends not to buy products which are harmful to the environment.	0.596	0.6	items)	items)
B8	Whenever possible, I buy products packaged in reusable containers.	0.564	0.682		
B9	I try to buy products that can be recycled.	0.638	0.592	_	

Source: Adapted from [32].

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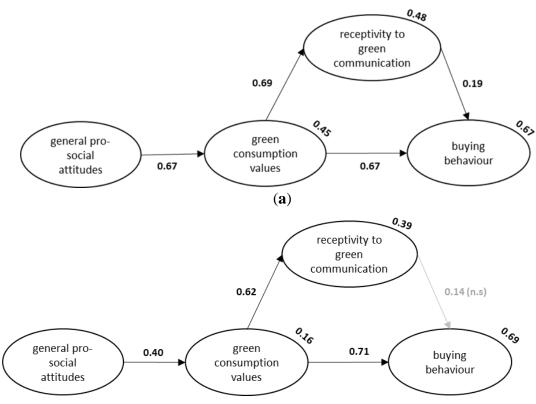
Using the non-parametric Spearman correlation, it was shown that there was a strong 436 statistically significant correlation between a specific dimension and the full scale with slightly 437 stronger correlation in the Polish sample (Table 3). Weaker correlations between any two 438 dimensions than correlations of a specific dimension with the full scale assessed the 439 discriminant validity of those dimensions. It should be noted that the general pro-social attitudes 440 dimension had the slightest association with organic food buying behaviour. In contrast, green 441 consumption values had the strongest association with the buying behaviour and receptivity to 442 green communication. 443

Table 3. Correlation between dimensions of the pro-environmental attitudes scale.

Correlation Coefficient		General Pro-Socia Attitudes	Green l Consumption Values	Receptivity to Green Communication	Buying Behaviour
PL sample	Full scale (Pro-environmental attitudes)	0.593 **	0.834 **	0.832 **	0.800 **
	General pro-social attitudes		0.421 **	0.394 **	0.300 **
	Green consumption values			0.567 **	0.702 **
	Receptivity to green communication				0.496 **
UK sample	Full scale (Pro-environmental attitudes)	0.569 **	0.799 **	0.818 **	0.800 **
	General pro-social attitudes		0.384 **	0.371 **	0.273 **
	Green consumption values			0.516 **	0.661 **
	Receptivity to green communication				0.478 **

Note: ** correlation significant at 0.01 level (two-tailed). Source: Own research.

The next step was to replicate the do Paço et al. [32] model in both samples via structural 447 equation modelling with latent variables, as both antecedents and consequences could be 448 assessed in such an approach. Model structure treated general pro-social attitudes as an 449 antecedent of green consumption values that explained buying behaviour. Receptivity to green 450 communication mediated the relationship between green consumption values and buying 451 behaviour (Figure 3). It should be noted that because do Paço et al. [32] used PLS-SEM 452 estimation in their study, the values of path coefficients were not directly comparable between 453 studies, as here the covariance-based structural equation modelling (CB-SEM) approach was 454 used (Model 1—Figure 3). The associations between general pro-social attitudes and green 455 consumption values, green consumption values and receptivity to green communication, and green consumption values and buying behaviour were statistically significant (at p < 0.01). In 457 contrast, the association between receptivity to green communication and buying behaviour 458 was not statistically significant for the UK cohort, but it was statistically significant for the 459 Polish one (PL p = 0.000, UK p = 0.076) (Figure 3). The impact of the receptivity to green 460 communication on buying behaviour was not statistically significant in the do Paço et al. [32] 461 research, as it was in the case of the UK sample in our study.



(b)

Figure 3. Model for testing green consumer behaviour (Model 1) (Source: Own elaboration463based on [32]). (a) Replication—PL sample (Model 1—PL). (b) Replication—UK sample464(Model 1—UK). Note: Estimates are placed next to the arrows. Statistically non-significant465coefficients are given in grey. The R-squared measure is reported above the latent variable466ellipse.467

It should be noted that the model did not fully explain green consumption behaviour (buying 469 behaviour variable in the model), and moreover, the coefficient of determination (R-squared) 470 varied for the Polish and UK samples (Figure 3). For example, 45% of the variance of the green 471 consumption values dimension could be explained by the intensity of general pro-social 472 attitudes among Polish respondents, but only 16% of the variance was explained in the UK 473 group. Additionally, in the case of the latent variable receptivity to green communication, a 474 greater proportion of the variance in the Polish sample was explained by the green consumption 475 values dimension than in the UK group. In both cases, buying over 30% of the variance of the 476

behaviour dimension was explained by constructs other than those included in the model477(receptivity to green communication and green consumption values).478

The replication of the do Paço et al. [32] model manifested a relatively good fit to the data 480 (Table 4), with better model fitting for the Polish than UK sample. This was partly an effect of 481 the smaller size of the UK sample. The close fit probability level for both models was 0.000, 482 which is reasonable for large samples, and the chi-square/df relative measure was low enough. 483 The fit to Polish sample data in terms of the RMSEA and SRMR was excellent. PCLOSE-the 484 probability that the population RMSEA < 0.05—equalled 1 in this case (the 90% confidence 485 interval endpoints were: LO 90 = 0.030, HI 90 = 0.032). The RMSEA was higher than the 486 recommended value for the UK sample but still lay in the acceptable range below 0.08. The 487 standardised root mean squared residual (SRMR) for Model 1 was 0.051 in the PL sample and 488 0.067 in the UK one, showing good fit. The (A)GFI fit indices were slightly lower than required 489 (especially in the UK sample). However, the CFI, NFI and TLI indices reached reference 490 values, suggesting a good model fit. 491

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	Probabi lity	Chi- Square	DF	PCMIN /DF	GFI	AGFI	CFI	NFI	TLI	RMSE A	SRMR
	Level										
Reference values *	>0.05	N/A	N/A	<5	>0.95	>0.9	>0.9	>0.9	>0.9	< 0.08	< 0.08
Model 1—PL	0.000	1164.063	373	3.121	0.905	0.889	0.955	0.935	0.951	0.051	0.045
Model 1—UK	0.000	642.746	374	1.719	0.787	0.752	0.914	0.817	0.906	0.067	0.076
Model 1b—UK **	0.000	639.656	373	1.715	0.787	0.752	0.914	0.818	0.907	0.067	0.074

Table 4. The Model 1 variance fit measures.

* Reference values were taken from Hu and Bentler [107]. ** Model 1b—UK was analysed with the non-significant path between receptivity and green communication and with buying behaviour construct removed. Note: IBM AMOS 27 estimation. Source: Own research.

The analysis of the data (to provide an answer for RQ2) using the Mann–Whitney U test showed499that Polish and British young people differed in the intensity of their pro-environmental500attitudes. These differences were statistically significant at p < 0.01 for most scale items except501receptivity to green communication (Table 5). For general pro-social attitudes, the UK sample502manifested a higher general level of the attitude's intensity than the PL sample. This was also503valid for the majority of items in the dimension. No statistically significant differences applied504sotusively to the following attitude: "It is important all people are happy."505

Table 5. Differences in agreement level between Polish and the UK507respondents—pro-environmental attitudes scale.508

	Mean PL Sample	Mean UK Sample	<i>p</i> - Value
General pro-social attitudes			
1. It is important that others are happy.	4.06	4.34	0.000
2. It is important to help someone who needs it.	4.3	4.5	0.002
3. I want to help others.	4.13	4.44	0.000
4. The well-being of others is important.	4.13	4.47	0.000
5. The needs of others are important.	4.05	4.31	0.000
6. It is important that all people are happy.	4.09	4.18	0.324
Green consumption values			
1. It is important to me that the products I use do not harm the environment.	3.78	4.18	0.000
2. I consider the potential environmental impact of my actions when making many of my decisions.	3.5	3.93	0.000
3. My purchase habits are affected by my concern for our environment.	3.59	3.84	0.004
4. I am concerned about wasting the resources of our planet.	4.08	4.42	0.000
4. I am concerned about wasting the resources of our planet.	4.08	4.42	0.00

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5. I would describe myself as environmentally responsible.	3.47	3.83	0.000
6. I am willing to be inconvenienced in order to take actions that are more	3.42	4.03	0.000
environmentally friendly.	3112		0.000
Receptivity to green communication			
1. I support brands that support the environment.	3.47	4.07	0.000
2. I tend to pay attention to advertising messages that talk about the environment.	3.49	3.72	0.006
3. The use of green messages in ads affects my attitude toward the ads.	3.24	3.78	0.000
4. I respond favourably to brands that use green messages in their advertising.	3.58	3.72	0.124
5. I am the kind of consumer who responds favourably when brands use green	3.51	3.63	0.273
messages in their ads.	5.51	5.05	0.275
6. I think that green advertising is valuable.	3.64	3.79	0.098
7. I avoid buying products that have excessive packaging.	3.84	3.74	0.279
8. I am the kind of consumer who is willing to purchase products marketed as	3.23	3.88	0.000
being green.	5.25	5.00	0.000
9. I tend to pay attention to green advertising messages.	3.27	3.66	0.000
Buying behaviour			
1. I avoid buying products that have excessive packaging.	3.57	4.02	0.000
2. When there is a choice, I choose the product that causes the least pollution.	3.6	4.05	0.000
3. I have switched products/brands for ecological reasons.	2.98	3.94	0.000
4. I make every effort to buy paper products made from recycled paper.	3.1	3.66	0.000
5. I use environmentally friendly soaps and detergents.	3.19	3.56	0.000
6. I have convinced members of my family or friends not to buy products which	3	3.7	0.000
are harmful to the environment.	3	5.7	0.000
7. Whenever possible, I buy products packaged in reusable containers.	3.95	4.13	0.028
8. I try to buy products that can be recycled.	3.73	4.37	0.000

Source: Own research. n = 973 (n = 812 in the PL sample, n = 161 in the UK sample).

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In terms of green consumption values and buying behaviour, the UK population manifested a 511 higher level of agreement with the statements with statistical significance for all statements at 512 p < 0.01. There were nine statements in the dimension "receptivity to green communication". 513 The intensity of agreement was higher for the UK respondents than Polish ones in all these 514 statements. However, for the following four statements, there was greater coherence, and the 515 difference was not statistically significant at p < 0.01: "I avoid buying products that have 516 excessive packaging"; "I respond favourably to brands that use green messages in their 517 advertising"; "I am the kind of consumer who responds favourably when brands use green 518 messages in their ads"; and "I think that green advertising is valuable". Figure 4 presents 519 distributions of aggregate responses by dimension showing the greatest difference in shapes of 520 distributions of the two samples in green consumption values and buying behaviour. In case of 521 these dimensions, the distributions concerning the UK sample were strongly left-skewed in 522 comparison with symmetric distributions of the PL sample. 523

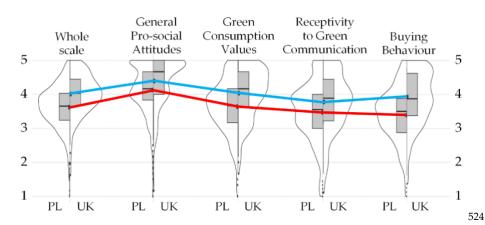


Figure 4. Pro-environmental attitudes intensity (by dimensions) for the PL (mean in red) and the UK (mean in blue) samples (Source: Own elaboration.). Note: Results were recalculated into the 5-point answer format. Subsequently, 5-point Likert scale was used where 1 denotes the lowest and 5 the highest intensity of attitudes.

These findings address RQ1 and RQ2. The scale was verified as equally valid for the Polish530and UK cohorts (RQ1). Moreover, there were higher levels of pro-environmental attitudes in531the UK as compared with Poland (RQ2). The postulated relationship between the purchase of532organic food and intensity of the general pro-social attitudes was examined (RQ3). The results533of Kruskal–Wallis test confirmed that people with a higher intensity of general pro-social534attitudes in both surveyed groups were more likely to purchase organic food (*p*-value < 0.001</td>535for the PL sample; *p*-value = 0.002 for the UK sample).536

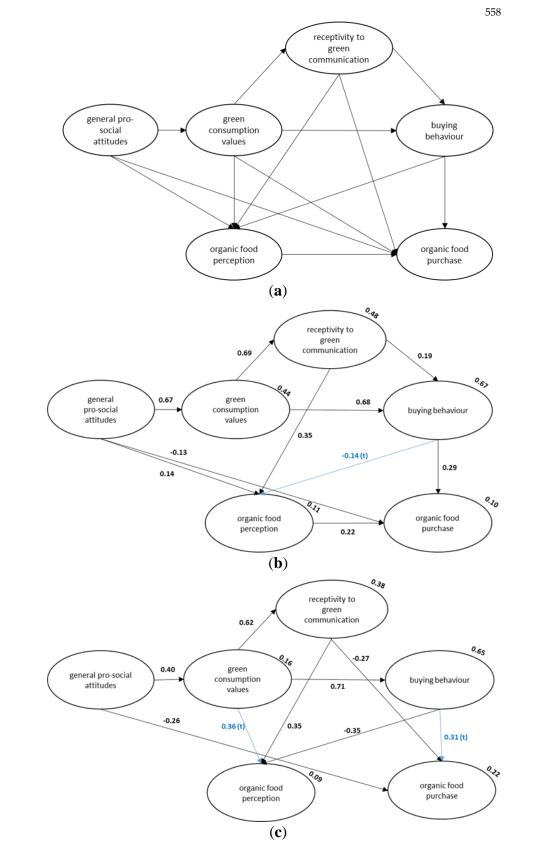
The study also investigated whether the perception of organic food influenced the choice of 538 organic food products (RQ4). The perception of organic food was verified on a unipolar 539 semantic scale that examined the perception of such dimensions as healthiness, trustworthiness, 540 quality, control system, authenticity, and safety. A grouping variable was prepared 541 (bad/neutral/good perception). The purchase of organic food was also measured on a 542 dichotomous nominal scale (declaration of whether the respondent buys or does not buy this 543 type of food). Using the chi-squared test a significant relationship was shown between the 544 variables in the Polish cohort (p = 0.000) and trends, but there was a non-significant relationship 545 in the British one (p = 0.099). It means that the Polish respondents who had a positive perception 546 of organic food were statistically more likely to buy organic food (Kruskal–Wallis test, p =547 0.000). In the UK, the association between the perception of organic food and purchasing 548 behaviour was not observed to the same extent. These findings need to be explored further in 549 future studies. We now propose a new model for verifying the extent to which variables such 550 as individual dimensions of pro-environmental attitudes and perception of organic food can 551 explain the purchase of organic food (Figure 5). This model extends the do Paço et al. [32] 552 approach, seeking an explanation of the introduced construct "organic food purchase" by 553 similar variables to those used by do Paco et al. [32] and the added construct "organic food 554 perception". All variables in Figure 5 are latent variables, as explained in the Materials and 555

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Methods section of the paper. Model 2 fitted the data well (Table 6), although the fit was better 556 for the PL sample than the UK one. 557

Figure 5. Extended organic food purchasing decision model—Model 2. (Source: Own559elaboration with the use of IBM AMOS 27 estimation.) (a) Structure of the tested model. (b)560Estimation results—PL sample (Model 2—PL). (c) Estimation results—UK sample (Model 2—
UK). Note 1: The models present only statistically significant estimates. Lack of an arrow562between variables means that the estimation of the relationship was statistically insignificant.563Note 2: Estimates are placed next to the arrows. R² is above the circle. Abbreviation (t) indicates564the statistical tendency (in blue).565

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	Probability		DF	PCMIN/DF	GFI	AGFI	CFI	NFI	TLI	RMSEA	SRMR
	Level	Square									
Reference values	>0.05	N/A	N/A	<5	>0.95	>0.9	>0.9	>0.9	>0.9	< 0.08	< 0.08
Model 2— PL	0.000	1629.689	619	2.633	0.895	0.880	0.952	0.924	0.948	0.045	0.042
Model 2— UK	0.000	933.979	620	1.506	0.770	0.740	0.919	0.795	0.913	0.056	0.070

Table 6. Model 2 fit statistics.

* Reference values were taken from Hu and Bentler [107]. IBM AMOS 27 estimation. n = 973. Source: Own research.

In summary, Model 2 shows that neither the intensity of the pro-environmental attitude 570 components nor the perception of organic food explained the consumers' choices to buy organic 571 food to a satisfactory extent. Among Polish young consumers, only approximately 10% of the 572 variance was explained, while among British young consumers this value was twice as high 573 (22%). Thus, nearly 80% (UK) or 90% (PL) of the variance was explained by factors other than 574 the intensity of the pro-environmental attitude components and the perception of organic food. 575 As a consequence, it is possible that organic food buying behaviour results from more complex 576 cognitive and emotional processes not included in our model. 577

Different constructs were shown to exert a decisive impact on buying behaviour, with particular 579 regard to the organic food market. In Poland, the formation of green consumption values was 580 significantly influenced by general pro-social attitudes, whereas, in the UK, the importance of 581 this dimension was much lower (Table 7) and a smaller proportion of the variance observed 582 was explained. It is interesting to note that buying behaviour was negatively associated with the 583 perception of organic food in both Model 2-PL and Model 2-UK, although more strongly in 584 the UK group. Perhaps this issue is related to negative experiences following previous 585 purchases of green food products or to factors that were not explored in this study, such as price 586 or availability. Again, this constitutes an avenue for future research. With the UK sample, green 587 consumption values were significantly positively associated with organic food purchasing 588 decisions, rather than general pro-social attitudes, receptivity to green communication, or the 589 perception of organic food (Table 7). In the PL sample, green consumption values and buying 590 behaviour were associated with the purchase of organic food, and the perception of organic 591 food was mainly influenced by receptivity to green communication. 592

Standardised	Explained		Fynlai	natory Va	righlag	
Effects	Variables	ATT		COMM	BEH	PERC
Effects	variables	PL san		COMM	DEII	IERC
	VAL	0.666	0.000	0.000	0.000	0.000
	COMM	0.461	0.693	0.000	0.000	0.000
Standardised total	BEH	0.538	0.808	0.189	0.000	0.000
effects	PERC	0.220	0.118	0.313	-0.146	0.000
	PURCH	0.071	0.254	0.116	0.256	0.199
	VAL	0.666	0.000	0.000	0.000	0.000
	COMM	0.000	0.693	0.000	0.000	0.000
Standardised direct	BEH	0.000	0.677	0.189	0.000	0.000
effects	PERC	0.141	0.000	0.341	-0.146	0.000
	PURCH	-0.126	0.000	0.000	0.285	0.199
	VAL	0.000	0.000	0.000	0.000	0.000
Q 1 1 1	COMM	0.461	0.000	0.000	0.000	0.000
Standardised	BEH	0.538	0.131	0.000	0.000	0.000
indirect effects	PERC	0.079	0.118	-0.028	0.000	0.000
	PURCH	0.197	0.254	0.116	-0.029	0.174
		UK san	nple			
	VAL	0.402	0.000	0.000	0.000	0.000
Standardised total	COMM	0.256	0.635	0.000	0.000	0.000
effects	BEH	0.327	0.812	0.000	0.000	0.000
effects	PERC	0.081	0.201	0.000	-0.364	0.000
	PURCH	-0.093	0.329	-0.203	0.451	0.184
	VAL	0.402	0.000	0.000	0.000	0.000
Standardised direct	COMM	0.000	0.635	0.000	0.000	0.000
effects	BEH	0.000	0.812	0.000	0.000	0.000
cifects	PERC	0.000	0.497	0.000	-0.364	0.000
	PURCH	-0.226	0.000	-0.203	0.518	0.184
	VAL	0.000	0.000	0.000	0.000	0.000
Standardised	COMM	0.256	0.000	0.000	0.000	0.000
indirect effects	BEH	0.327	0.000	0.000	0.000	0.000
muneet encets	PERC	0.081	-0.296	0.000	0.000	0.000
	PURCH	0.132	0.329	0.000	-0.067	0.000

Table 7. Standardised	effects of	of variables	used in Model 2.
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Note: The names of variables in the model are abbreviated. ATT = "general pro-social attitudes", VAL = "green consumption values", COMM = "receptivity to green communication", BEH = "buying behaviour", PERC = "organic food perception", PURCH = "organic food purchase". Source: Own research.

5. Discussion and Concluding Thoughts

Whilst the average spend on organic food products is low compared to other European 601 countries, the UK is a country with a mature market for organic food [108,109], while London 602 has a relatively more mature market than other regions [110]. Despite the organic food market 603

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being perceived as one of the most promising food market sectors in Poland [111], the Polish 604 market for organic food is still immature, particularly due to poorly developed distribution 605 channels [112]. Łuczka [112] identified the major barriers to the development of the organic 606 food market in Poland, i.e., relatively high prices, legislator requirements, physical availability 607 of some food products (e.g., fresh food), and a small offer of organic food products in the 608 market. Many contextual factors, including prices of organic food, peer influence, and 609 availability of organic food, may affect individual motivation, perception, and behavioural 610 outcome. However, the most careful attention should be paid to drawing up a list of these 611 contextual factors, and further research is needed in this area. Furthermore, contextual factors 612 may have either direct or indirect impact on behaviour [113]. It has been proven before that low 613 physical availability and limited economic accessibility of organic products are the main 614 barriers to the growth of the organic food market in Poland [84,112]. 615

Our study was designed to test and extend the model of do Paço et al. [32] for young consumers 617 from the UK and Poland in order to evaluate its applicability in given generational cohorts and 618 show differences between young consumers' attitudes and behaviour concerning organic food 619 in Poland and the UK. The research confirmed that the scale proposed by do Paço et al. [32] 620 can be used to assess the intensity of consumer attitudes. Moreover, it was proved that the model 621 with dimensions proposed by do Paço et al. [32] retained good model fit in studies on young 622 consumers in countries with different backgrounds regarding the tackling of pro-environmental 623 issues (RQ1). Polish and UK young residents differed in terms of the intensity of pro-624 environmental attitudes (RQ2). It is noticeable that the UK cohort comprised more conscious 625 green consumers than the Polish one. The UK cohort was also more homogeneous. In both the 626 PL and the UK group, respondents with a higher intensity of the pro-environmental attitudes 627 were more likely to decide to buy organic food (RQ3). Perception of organic food more strongly 628 influenced the purchase of organic food among Polish than British young consumers (RQ4). 629 However, it can be stated that the intensity of the pro-environmental attitude components and 630 the perception of organic food did not explain the young consumers' purchases of organic food 631 to a satisfactory extent in either country. This is in line with other studies, including the study 632 by Pham et al. [114] that showed that environmental concern and food taste were limited in 633 predicting attitudes towards organic food. They concluded that perceived barriers to the 634 development of the organic food market include, i.e., high prices, poor availability, poor 635 labelling, and reduced convenience. 636

The question arises as to whether limited buying behaviour for organic food in Poland and the 638 UK, as attested by the data on per capita spending on organic food in these countries, is related 639 to consumers' lack of knowledge of organic systems, issues around access, and affordability or 640 to consumers' assessment of the level of sustainability derived by organic food systems. Other 641 foods from alternative sources in the UK may instead be seen as alternatives for green 642 consumption, e.g., regional food, local food, and domestic/home food products which are in 643 direct competition in the marketplace with organic food products. Indeed, in a time where 644 organic production is low yielding, this is at odds with concerns for making space for nature 645

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and regenerating natural biodiversity, if organic production is not perceived to deliver on this 646 agenda. Our research results can help decision-makers in the food sector to make informed 647 choices. As per capita consumption of organic food and antecedents of buying behaviour differ 648 between European countries, it is crucial for each state and every company operating in a given 649 area to develop its own national/business strategy. Due to the recognized differences between 650 the UK and Polish organic food market, both manufacturers and retailers should develop 651 marketing strategies tailored to the specificities of the countries in which they operate. There is 652 still room for public awareness campaigns in Poland to improve consumers' knowledge of the 653 organic food logo and of the benefits of organic production and consumption, but if other 654 barriers persist, this alone will not drive an increase in organic food purchases. Reducing supply 655 chain inefficiencies to improve the functioning of the organic food supply chain in Poland 656 would be of value since the major barrier to the development of the organic food market has 657 been the low availability of numerous organic products for the last decades. It seems that state 658 intervention in the organic market mechanisms in Poland is both inevitable and necessary. 659

6. Limitations

It should be noted that the present research has certain limitations. First, the research was 663 conducted during the COVID-19 pandemic when various restrictions on movement (lockdown) 664 were in place in both countries. It is difficult to assess the extent to which the experience of this 665 situation influenced respondents' answers and modified their purchase decisions. The pandemic 666 also caused some consumers to return to their home country. It is most likely that a substantial 667 number of such consumers lived in the surveyed countries for some time before the pandemic. 668 That is why responses from people staying outside of the surveyed countries were not excluded 669 from the analyses. Second, the Polish sample was significantly larger than the UK sample. A 670 larger UK sample could have benefited the fit of the proposed model of organic food purchasing 671 developed in the study (Model 2). Third, two groups of young consumers (mainly students) 672 were surveyed; thus, the results could not be generalised to the entire Polish/British population. 673 The items in the questionnaire were also of a declarative nature, which is a weakness of tools 674 such as CAWI. However, it is difficult to conduct other surveys in the time of a pandemic. 675

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Institutional Review Board Statement: All subjects gave their informed consent for inclusion 683 before they participated in the study. The study was conducted in accordance with the 684 Declaration of Helsinki, and the protocol was approved by the Research Ethics Committee of 685 Maria Curie-Skłodowska University, Lublin, Poland, on 10 November 2020, and by the 686

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Research Ethics Review and Approvals Sub-Committee of Royal Agricultural University, UK, on 2 November 2020 (reference number 20202702-Manning).	687 688
Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.	689 690
Data Availability Statement: The data that support the findings of this study are available on request from M.R.	691 692
Conflicts of Interest: The authors declare no conflicts of interest.	693
References	694
1. Dhandra, T.K. Achieving triple dividend through mindfulness: More sustainable consumption, less unsustainable consumption and more life satisfaction. <i>Ecol. Econ.</i> 2019 , <i>161</i> , 82, 00, https://doi.org/10.1016/j.acalacan.2010.02.021	696
 161, 83–90, https://doi.org/10.1016/j.ecolecon.2019.03.021. Fischer, D.; Böhme, T.; Geiger, S.M. Measuring young consumers' sustainable consumption behaviour: Development and validation of the YCSCB scale. <i>Young Consum.</i> 	
 2017, 18, 312–326, https://doi.org/10.1108/YC-03-2017-00671. 3. Liu, W.; Oosterveer, P.; Spaargaren, G. Promoting sustainable consumption in China: A conceptual framework and research review. J. Clean. Prod. 2016, 134, 13–21, 	
 https://doi.org/10.1016/j.jclepro.2015.10.124. 4. Mont, O.; Neuvonen, A.; Lähteenoja, S. Sustainable lifestyles 2050: Stakeholder visions, emerging practices and future research. J. Clean. Prod. 2014, 63, 24–32, 	703 704
 https://doi.org/10.1016/j.jclepro.2013.09.007. 5. Bridgewater, P.; Guarino, E.; Thompson, R.M. Hydrology in the Anthropocene. In 	706 707
<i>Encyclopedia of the Anthropocene</i> ; Dellasala, D.A., Goldstein, M.I., Eds.; Elsevier: Amsterdam, The Netherlands, 2018; pp. 87–92, https://doi.org/10.1016/B978-0-12-809665-9.09916-X.	
6. Busch, J.; Engelmann, J. Cost-effectiveness of reducing emissions from tropical deforestation, 2016–2050. <i>Environ. Res. Lett.</i> 2018 , <i>13</i> , 015001,	711 712
 https://doi.org/10.1088/1748-9326/aa907c. 7. Fawzy, S.; Osman, A.I.; Doran, J.; Rooney, D.W. Strategies for mitigation of climate change: A review. <i>Environ. Chem. Lett.</i> 2020, <i>18</i>, 2069–2094, https://doi.org/10.1007/s10311-020-01059-w. 	715
 Xie, H.; Zhang, Y.; Wu, Z.; Lv, T. A Bibliometric Analysis on Land Degradation: Current Status, Development, and Future Directions. <i>Land</i> 2020, 9, 28, https://doi.org/10.3390/land9010028. 	
 Yao, L.; Li, X.; Li, Q.; Wang, J. Temporal and Spatial Changes in Coupling and Coordinating Degree of New Urbanization and Ecological-Environmental Stress in China. <i>Sustainability</i> 2019, 11, 1171, https://doi.org/10.3390/su11041171. 	720 721
10. WHO. 2021. Climate Change and Human Health. Available online:	
 https://www.who.int/globalchange/environment/en/ (accessed on 23 April 2021). 11. Cohen, M.J. Does the COVID-19 outbreak mark the onset of a sustainable consumption transition? <i>Sustain. Sci. Pract. Policy</i> 2020, 16, 1–3, https://doi.org/10.1080/15487733.2020.1740472. 	
 United Nations. 1992. Agenda 21. Available online: https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf (accessed on 23 April 2021). 	728
 Béné, C.; Oosterveer, P.; Lamotte, L.; Brouwer, I.D.; de Haan, S.; Prager, S.D.; Talsma, E.F.; Khoury, C.K. When food systems meet sustainability—Current narratives and 	731

implications for World Dev. 2019. 113. actions. 116-130. 733 https://doi.org/10.1016/j.worlddev.2018.08.011. 734

- 14. Willett, W.; Rockström, J.; Loken, B.; Springmann, M.; Lang, T.; Vermeulen, S.; Garnett, 735 T.; Tilman, D.; DeClerck, F.; Wood, A.; et al. Food in the Anthropocene: The EAT-Lancet 736 Commission on healthy diets from sustainable food systems. *Lancet* **2019**, *393*, 447–492, 737 https://doi.org/10.1016/S0140-6736(18)31788-4. 738
- 15. United Nations. 2015. Transforming Our World: The 2030 Agenda for Sustainable 739 Development. Available online: 740 https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E (accessed on 741 23 April 2021). 742
- 16. Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 743 on organic production and labelling of organic products and repealing Council Regulation 744 (EC) No 834/2007 (OJ L 150, 14.6.2018, p. 1–92). 745
- 17. Kahawandala, N.; Peter, S.; Niwunhella, H. Profiling purchasing behaviour of Generation 746 Z. In Proceedings of the 2020 International Research Conference on Smart Computing and 747 Systems Engineering (SCSE), Colombo, Sri Lanka, 24 September 2020; pp. 155–160, 748 https://doi.org/10.1109/SCSE49731.2020.9313038. 749
- 18. Su, C.-H.; Tsai, C.-H.; Chen, M.-H.; Lv, W.Q. U.S. Sustainable Food Market Generation 750 Z Consumer Segments. Sustainability 2019, 11, 3607, https://doi.org/10.3390/su11133607. 751
- 19. Naderi, I.; Van Steenburg, E. Me first, then the environment: Young Millennials as green 752 consumers. Young Consum. 2018, 19, 280-295, https://doi.org/10.1108/YC-08-2017-753 00722. 754
- 20. Berkup, S.B. Working with Generations X and Y in Generation Z Period: Management of Different Generations in Business Life. Mediterr. J. Soc. Sci. 2014, 5, 218-229, https://doi.org/10.5901/mjss.2014.v5n19p218.
- 21. Dimock, M. Defining Generations: Where Millennials End and Generation Z Begins. Pew 758 Research Center. 2019. Available online: https://www.pewresearch.org/facttank/2019/01/17/where-millennials-end-and-generation-z-begins/ (accessed on 25 February 2021).
- 22. Ivanova, O.; Flores-Zamora, J.; Khelladi, I.; Ivanaj, S. The generational cohort effect in the 762 context of responsible consumption. Manag. Decis. **2019**, *57*, 1162–1183. 763 https://doi.org/10.1108/MD-12-2016-0915. 764
- 23. Viswanathan, V.; Jain, V. A dual-system approach to understanding "generation Y" decision making. J. Consum. Mark. 2013, 30, 484-492, https://doi.org/10.1108/JCM-07-2013-0649.
- 24. Prasad, S.; Garg, A.; Prasad, S. Purchase decision of generation Y in an online environment. Mark. Intell. Plan. 2019, 37, 372-385, https://doi.org/10.1108/MIP-02-2018-0070.
- 25. Di Giulio, A.: Fuchs, D. Sustainable Consumption Corridors: Concept, Objections, and GAIA—Ecol. Perspect. Sci. Soc. 2014. 23. 184–192. Responses. https://doi.org/10.14512/gaia.23.S1.6.
- 26. Ajzen, I. From intentions to actions: A theory of planned behaviour. In Action Control: From Cognition to Behaviour; Kuhl, J., Beckmann, J., Eds.; Springer: New York, NY, USA, 1985; pp. 11–39, https://doi.org/10.1007/978-3-642-69746-3_2.
- 27. Ajzen, I. The Theory of Planned Behaviour. Organ. Behav. Hum. Decis. Process. 1991, 50, 179–211, https://doi.org/10.1016/0749-5978(91)90020-T.
- 28. Fishbein, M.; Ajzen, I. Belief, Attitude, Intention, and Behaviour: An Introduction to 779 Theory and Research; Addison-Wesley: Reading, MA, USA, 1975. 780
- 29. Straughan, R.D.; Roberts, J.A. Environmental segmentation alternatives: A look at green 781 consumer behavior in the new millennium. J. Consum. Mark. 1999, 16, 558-575, 782 https://doi.org/10.1108/07363769910297506. 783

755

756

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772

773

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776

777

- 30. Stern, P.C.; Dietz, T.; Abel, T.; Guagnano, G.A.; Kalof, L. A value-belief-norm theory of 784 support for social movements: The case of environmentalism. Hum. Ecol. Rev. 1999, 6, 785 81–97. 786
- 31. Davari, A.; Iyer, P.; Strutton, D. Investigating Moral Links Between Religiosity, Altruism, and Green Consumption. J. Nonprofit Public Sect. Mark. 2017, 29, 385-414, https://doi.org/10.1080/10495142.2017.1326338.
- 32. Do Paço, A.; Shiel, C.; Alves, H. A new model for testing green consumer behaviour. J. 790 Clean. Prod. 2019, 207, 998–1006, https://doi.org/10.1016/j.jclepro.2018.10.105. 791
- 33. Ashraf, M.A.; Joarder MH, R.; Ratan, S.R.A. Consumers' anti-consumption behaviour 792 toward organic food purchase: An analysis using SEM. Br. Food J. 2018, 121, 104-122, 793 https://doi.org/10.1108/BFJ-02-2018-0072. 794
- 34. Rahman, K.M.; Noor, D.A.M. Evaluating Gaps in Consumer Behaviour Research on 795 Organic Foods: A Critical Literature Review under Bangladesh Context. J. Mark. Cons. 796 1. Behav. Emerg. Mark. 2016. 42-50, https://doi.org/10.7172/2449-797 6634.jmcbem.2016.1.4. 798
- 35. Sobhanifard, Y.; Griffith, C. Hybrid modelling of the consumption of organic foods in Iran using exploratory factor analysis and an artificial neural network. Br. Food J. 2018, 120, 44-58, https://doi.org/10.1108/BFJ-12-2016-0604.
- 36. Jungbluth, N.; Tietje, O.; Scholz, R. Food purchases: Impacts from the consumers' point of view investigated with a modular LCA. Int. J. Life Cycle Assess. 2000, 5, 134-142, https://doi.org/10.1007/BF02978609.
- 37. Hansmann, R.; Baur, I.; Binder, C.R. Increasing organic food consumption: An integrating 805 model of drivers and barriers. J. Clean. Prod. 2020, 275, 123058. 806 https://doi.org/10.1016/j.jclepro.2020.123058. 807
- 38. Lorenz, K.; Lal, R. Chapter Three-Environmental Impact of Organic Agriculture. In 808 Advances in Agronomy; Sparks, D.L., Ed.; Academic Press: Cambridge, MA, USA; 809 Elsevier: Volume Oxford, UK, 139, 2016; pp. 99–152, 810 https://doi.org/10.1016/bs.agron.2016.05.003. 811
- 39. Muller, A.; Schader, C.; Scialabba, N.E.H.; Brüggemann, J.; Isensee, A.; Erb, K.H.; Smith, 812 P.; Klocke, P.; Leiber, F.; Stolze, M.; et al. Strategies for feeding the world more 813 sustainably with organic agriculture. Nat. Commun. 2017. 8. 1290. 814 https://doi.org/10.1038/s41467-017-01410-w. 815
- 40. Treu, H.; Nordborg, M.; Cederberg, C.; Heuer, T.; Claupein, E.; Hoffmann, H.; Berndes, G. Carbon footprint sand land use of conventional and organic diets in Germany. J. Clean. 817 *Prod.* **2017**, *161*, 127–142, https://doi.org/10.1016/j.jclepro.2017.05.041.
- 41. Tuomisto, H.L.; Hodge, I.D.; Riordan, P.; Macdonald, D.W. Does organic farming reduce environmental impacts?—A meta-analysis of European research. J. Environ. Manag. 2012, 112, 309–320, https://doi.org/10.1016/j.jenvman.2012.08.018. 821
- 42. Meemken, E.-M.; Qaim, M. Organic agriculture, food security, and the environment. Annu. 822 Rev. Resour. Econ. 2018, 10, 39-63, https://doi.org/10.1146/annurev-resource-100517-823 023252. 824
- 43. IFOAM Organics International. How Organic Agriculture Helps Achieve Sustainable 825 Development Goals. 2021. Available online: 826 https://www.ifoam.bio/sites/default/files/2020-05/oasdgs web.pdf (accessed on 29 April 827 2021). 828
- 44. Notarnicola, B.; Tassielli, G.; Renzulli, P.A.; Castellani, V.; Sala, S. Environmental 829 impacts of food consumption in Europe. J. Clean. Prod. 2017, 140, 753-765, 830 https://doi.org/10.1016/j.jclepro.2016.06.080. 831
- 45. Seufert, V.; Ramankutty, N.; Foley, J.A. Comparing the yields of organic and conventional 832 agriculture. Nature 2012, 485, 229–232, https://doi.org/10.1016/j.foodpol.2016.12.009. 833

787

788

789

799

800

801

802

803

804

816

818

819

46.	Goodland, R. The Concept of Environmental Sustainability. Annu. Rev. Ecol. Syst. 1995,	834
	26, 1–24, https://doi.org/10.1146/annurev.es.26.110195.000245.	835
47.	Ottman, J.; Terry, V. Strategic marketing of greener products. J. Sustain. Prod. Des. 1998,	836
	5, 53–57.	837
48.	Rana, J.; Paul, J. Consumer behaviour and purchase intention for organic food: A review	838
	and research agenda. J. Retail. Consum. Serv. 2017, 38, 157–165,	839
	https://doi.org/10.1016/j.jretconser.2017.06.004.	840
40	Willer, H.; Trávníček, J.; Meier, C.; Schlatter, B. (Eds.). <i>The World of Organic Agriculture</i> .	
49.		841
	Statistics and Emerging Trends 2021; Research Institute of Organic Agriculture (FiBL),	842
50	Frick, and IFOAM—Organics International: Bonn, Germany, 2021.	843
50.	Thogersen, J. Country differences in sustainable consumption: The case of organic food.	844
	J. Macromark. 2010, 30, 171–185, https://doi.org/10.1177/0276146710361926.	845
51.	FiBL Statistics. Interactive Online Database, 2021. Available online:	846
	https://statistics.fibl.org/data.html (accessed on 10 May 2021).	847
52.	Ottman, J.A. Green Marketing: Challenges and Opportunities for the New Marketing Age;	848
	NTC Business Books: New York, NY, USA, 1993.	849
53.	Perera, C.; Auger, P.; Klein, J. Green Consumption Practices Among Young	850
	Environmentalists: A Practice Theory Perspective. J. Bus. Ethics 2018, 152, 843-864,	851
	https://doi.org/10.1007/s10551-016-3376-3.	852
54	Brochado, A.; Teiga, N.; Oliveira-Brachado, F. The ecological conscious consumer	853
54.	behaviour: Are the activist different? Int. J. Consum. Stud. 2017, 41, 138–146,	854
55	https://doi.org/10.1111/ijcs.12321.	855
55.	Quoquab, F.; Mohammad, J.; Sukari, N.N. A multiple-item scale for measuring	856
	"sustainable consumption behaviour" construct. Asia Pac. J. Mark. Logist. 2019, 31, 791–	857
	816, https://doi.org/10.1108/APJML-02-2018-0047.	858
56.	Tamuliene, V.; Kazlauskiene, E.; Pilelienė, L. Ecologically-Conscious Consumer	859
	Purchases in Lithuania. Montenegrin J. Econ. 2016, 12, 87–96.	860
57.	Zhang, X.; Dong, F. Why Do Consumers Make Green Purchase Decisions? Insights from	861
	a Systematic Review. Int. J. Environ. Res. Public Health 2020, 17, 6607,	862
	https://doi.org/10.3390/ijerph17186607.	863
58.	Chaudhary, R.; Bisai, S. Factors influencing green purchase behaviour of millennials in	864
	India. Manag. Environ. Qual. 2018, 29, 798-812, https://doi.org/10.1108/MEQ-02-2018-	865
	0023.	866
59.	Suki, N.M.; Suki, N.M. Examination of peer influence as a moderator and predictor in	867
	explaining green purchase behaviour in a developing country. J. Clean. Prod. 2019, 228,	868
	833–844, https://doi.org/10.1016/j.jclepro.2019.04.218.	869
60	Spielmann, N. Green is the New White: How Virtue Motivates Green Product Purchase. J.	870
00.	<i>Bus. Ethics</i> 2021 , <i>173</i> , 759–776, https://doi.org/10.1007/s10551-020-04493-6.	871
61	Osgood, J.M.; Muraven, M. Self-Control Depletion Does not Diminish Attitudes about	872
01.	Being Prosocial but Does Diminish Prosocial Behaviours. <i>Basic Appl. Soc. Psychol.</i> 2015,	873
	<i>37</i> , 68–80, https://doi.org/10.1080/01973533.2014.996225.	
67		874
02.	Baudry, J.; Péneau, S.; Allès, B.; Touvier, M.; Hercberg, S.; Galan, P.; Amiot, MJ.;	875
	Lairon, D.; Méjean, C.; Kesse-Guyot, E. Food Choice Motives When Purchasing in	876
	Organic and Conventional Consumer Clusters: Focus on Sustainable Concerns (The	877
~~	NutriNet-Santé Cohort Study). Nutrients 2017, 9, 88, https://doi.org/10.3390/nu9020088.	878
63.	Ghali-Zinoubi, Z.; Toukabri, M. The antecedents of the consumer purchase intention:	879
	Sensitivity to price and involvement in organic product: Moderating role of product	880
	regional identity. Trends Food Sci. Technol. 2019, 90, 175–179,	881
	https://doi.org/10.1016/j.tifs.2019.02.028.	882
64.	Ghvanidze, S.; Velikova, N.; Dodd, T.H.; Oldewage-Theron, W. Consumers'	883
	environmental and ethical consciousness and the use of the related food products	884

information: The role of perceived consumer effectiveness. Appetite 2016, 107, 311–322, 885 https://doi.org/10.1016/j.appet.2016.08.097. 886

- 65. Grunert, K.G.; Hieke, S.; Wills, J. Sustainability labels on food products: Consumer 887 motivation. understanding and use. Food Policv 2014. 44. 177–189. 888 https://doi.org/10.1016/j.foodpol.2013.12.001. 889
- 66. Katt, F.; Meixner, O. A systematic review of drivers influencing consumer willingness to 890 pay for organic food. Trends Food Sci. Technol. 2020, 100, 374–388, 891 https://doi.org/10.1016/j.tifs.2020.04.029. 892
- 67. Yarimoglu, E.; Binboga, G. Understanding sustainable consumption in an emerging 893 country: The antecedents and consequences of the ecologically conscious consumer 894 behaviour model. Bus. Strategy Environ. 2019. 28. 642-651. 895 https://doi.org/10.1002/bse.2270. 896
- 68. Testa, F.; Sarti, S.; Frey, M. Are green consumers really green? Exploring the factors 897 behind the actual consumption of organic food products. Bus. Strategy Environ. 2019, 28, 898 327-338, https://doi.org/10.1002/bse.2234. 899
- 69. Biswas, A.; Roy, M. Green products: An exploratory study on the consumer behaviour in economies of the east. J. Clean. Prod. emerging 2015, 87. 463-468. https://doi.org/10.1016/j.jclepro.2014.09.075.
- 70. Alagarsamy, S.; Mehrolia, S.; Mathew, S. How Green Consumption Value Affects Green 903 Consumer Behaviour: The Mediating Role of Consumer Attitudes Towards Sustainable Vision Food Logistics Practices. 2021. 25. 65-76. https://doi.org/10.1177/0972262920977986.
- 71. Haws, K.L.; Winterich, K.P.; Naylor, R.W. Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. J. Consum. Psychol. 2014, 24, 336–354, https://doi.org/10.1016/j.jcps.2013.11.002.
- 72. Groening, C.; Sarkis, J.; Zhu, Q. Green marketing consumer-level theory review: A compendium of applied theories and further research directions. J. Clean. Prod. 2018, 172, 1848–1866, https://doi.org/10.1016/j.jclepro.2017.12.002.
- 73. Kumar, P. Intents of green advertisements. Asia-Pac. J. Mark. Logist. 2017, 29, 70–79, https://doi.org/10.1108/APJML-03-2016-0044.
- 74. Alniacik, U.; Yilmaz, C. The Effectiveness of Green Advertising: Influences of Claim 915 Specificity, Product's Environmental Relevance and Consumers' Pro-environmental 916 Orientation. Amfiteatru Econ. 2012, 14, 207–222. 917
- 75. Bailey, A.A.; Mishra, A.; Tiamiyu, M.F. Green advertising receptivity: An initial scale 918 development 2014. process. J. Mark. Commun. 22. 327-345. 919 https://doi.org/10.1080/13527266.2014.904812. 920
- 76. Park, J.S.; Lee, J. Segmenting green consumers in the United States: Implications for green 921 20, 571-589, marketing. J. Promot. Manag. 2014, 922 https://doi.org/10.1080/10496491.2014.946202. 923
- 77. Sarkar, J.G.; Sarkar, A.; Yadav, R. Brand it green: Young consumers' brand attitudes and 924 purchase intentions toward green brand advertising appeals. Young Consum. 2019, 20, 925 190–207, https://doi.org/10.1108/YC-08-2018-0840. 926
- 78. Cerri, J.; Testa, F.; Rizzi, F. The more I care, the less I will listen to you: How information, 927 environmental concern and ethical production influence consumers' attitudes and the 928 purchasing of sustainable products. J. Clean. Prod. 2018, 175. 343-353. 929 https://doi.org/10.1016/j.jclepro.2017.12.054. 930
- 79. Rees, W.; Tremma, O.; Manning, L. Sustainability cues on packaging: The influence of 931 recognition on purchasing behaviour. J. Clean. Prod. 2019, 235, 841-853, 932 https://doi.org/10.1016/j.jclepro.2019.06.217. 933

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904

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906

907

908

909

910

911

912

913

Effects on stakeholders' perceptions. Bus. Strategy Environ. 2020, 29, 407-421, 935 https://doi.org/10.1002/bse.2373. 936 81. Kumar, P.; Ghodeswar, B.M. Factors affecting consumers' green product purchase 937 decisions. Mark. Intell. Plan. 2015, 33, 330-347, https://doi.org/10.1108/MIP-03-2014-938 0068. 939 82. Thamthanakoon, N.; Huang, I.Y.; Eastham, J.; Ward, S.; Manning, L. Factors driving 940 Thailand rice farmer decision-making in the choice of marketing channel. Br. Food J. 2021, 941 1-19, ahead of print, https://doi.org/10.1108/BFJ-11-2020-1040. 942 83. Kushwah, S.; Dhir, A.; Sagar, M.; Gupta, B. Determinants of organic food consumption. 943 A systematic literature review on motives and barriers. Appetite 2019, 143, 104402, 944 https://doi.org/10.1016/j.appet.2019.104402. 945 84. Bryła, P. Organic food consumption in Poland: Motives and barriers. Appetite 2016, 105, 946 737–746, https://doi.org/10.1016/j.appet.2016.07.012. 947 85. Zámková, M.; Rojík, S.; Pilař, L.; Chalupová, M.; Prokop, M.; Stolín, R.; Dziekański, P.; 948 Maitah, M. Customer Preferences for Organic Agriculture Produce in the Czech Republic: 949 2016 and 2019. Agriculture **2021**, *11*, 968, https://doi.org/10.3390/agriculture11100968. 950 86. Massey, M.; O'Cass, A.; Otahal, P. A meta-analytic study of the factors driving the 951 purchase of organic food. Appetite 2018. 125. 418–427, 952 https://doi.org/10.1016/j.appet.2018.02.029. 953 87. Manning, L.; Kowalska, A. Considering Fraud Vulnerability Associated with Credence-954 Based Products Such as Organic Food. Foods 2021. 10. 1879. 955 https://doi.org/10.3390/foods10081879. 956 88. Koklic, M.K.; Golob, U.; Podnar, K.; Zabkar, V. The interplay of past consumption, 957 attitudes and personal norms in organic food buying. Appetite 2019, 137, 27-34, 958 https://doi.org/10.1016/j.appet.2019.02.010. 959 89. Nuttavuthisit, K.; Thøgersen, J. The importance of consumer trust for the emergence of a 960 market for green products: The case of organic food. J. Bus. Ethics 2017, 140, 323-337, 961 https://doi.org/10.1007/s10551-015-2690-5. 962 90. Rana, J.; Paul, J. Health motive and the purchase of organic food: A meta-analytic review. 963 Int. J. Consum. Stud. 2020, 44, 162–171, https://doi.org/10.1111/ijcs.12556. 964 91. Rizzo, G.; Borrello, M.; Dara Guccione, G.; Schifani, G.; Cembalo, L. Organic Food 965 Consumption: The Relevance of the Health Attribute. Sustainability 2020, 12, 595, 966 https://doi.org/10.3390/su12020595. 967 92. Śmiglak-Krajewska, M.; Wojciechowska-Solis, J. Consumer versus Organic Products in 968 the COVID-19 Pandemic: Opportunities and Barriers to Market Development. Energies 969 2021, 14, 5566, https://doi.org/10.3390/en14175566. 970 93. Hansen, T.; Sørensen, M.I.; Eriksen, M.-L.R. How the interplay between consumer 971 motivations and values influences organic food identity and behaviour. *Food Policy* **2017**. 972 74, 39–52, https://doi.org/10.1016/j.foodpol.2017.11.003. 973 94. Hurtado-Barroso, S.; Tresserra-Rimbau, A.; Vallverdu-Queralt, A.; Lamuela-Raventos, 974 R.M. Organic food and the impact on human health. Crit. Rev. Food Sci. Nutr. 2017, 59, 975 704-714, https://doi.org/10.1080/10408398.2017.1394815. 976 95. Di Renzo, L.; De Lorenzo, A.; Merra, G.; Gualtieri, P. Comment on: "A Systematic Review 977 of Organic Versus Conventional Food Consumption: Is There a Measurable Benefit on 978 7". Human Health? Nutrients 2020, 12, **Nutrients** 2020, 12. 696, 979 https://doi.org/10.3390/nu12030696. 980 981

80. Torelli, R.; Balluchi, F.; Lazzini, A. Greenwashing and environmental communication:

96. Popa, M.E.; Mitelut, A.C.; Popa, E.E.; Stan, A.; Popa, V.I. Organic foods contribution to nutritional quality and value. *Trends Food Sci. Technol.* 2019, 84, 15–18, 982 https://doi.org/10.1016/j.tifs.2018.01.003.

97.	Smith-Spangler, C.; Brandeau, M.L.; Hunter, G.E.; Bavinger, J.C.; Pearson, M.; Eschbach,	984
	P.J.; Sundaram, V.; Liu, H.; Schirmer, P.; Stave, C.; et al. Are organic foods safer or	985
	healthier than conventional alternatives?: A systematic review. Ann Intern Med. 2012, 157,	986
	348-366, https://doi.org/10.7326/0003-4819-157-5-201209040-00007; Erratum in Ann	987
	Intern Med. 2012, 157, 680; Erratum in Ann Intern Med. 2012, 157, 532.	988
98.	Ballew, M.; Marlon, J.; Rosenthal, S.; Gustafson, A.; Kotcher, J.; Maibach, E.; Leiserowitz,	989
	A. Do Younger Generations Care More about Global Warming?; Yale Program on Climate	990
	Change Communication: New Haven, CT, USA, 2019.	991
99.	Kanchanapibul, M.; Lacka, E.; Wang, X.; Chan, K. An empirical investigation of green	992
	purchase behaviour among the young generation. J. Clean. Prod. 2014, 66, 528-536,	993
	https://doi.org/10.1016/j.jclepro.2013.10.062.	994
100	Allison, P.D. Missing data techniques for structural equation modeling. J. Abnorm.	995
	Psychol. 2003, 112, 545–557, https://doi.org/10.1037/0021-843X.112.4.545.	996
101	.Buhi, E.R.; Goodson, P.; Neilands, T.B. Out of sight, not out of mind: Strategies for	997
	handling missing data. Am. J. Health Behav. 2008, 32, 83–92,	998
	https://doi.org/10.5555/ajhb.2008.32.1.83.	999
102	.Little, R.J.A.; Rubin, D.B. Statistical Analysis with Missing Data; Wiley: New York, NY,	1000
	USA, 1987.	1001
103	.Doorn, J.; Verhoef, P.C. Drivers of and Barriers to Organic Purchase Behaviour. J. Retail.	1002
	2015 , <i>91</i> , 436–450, https://doi.org/10.1016/j.jretai.2015.02.003.	1003
104	Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. Multivariate Data Analysis: Global	1004
	Edition; Prentice Hall: Upper Saddle River, NJ, USA, 1998.	1005
105	.Sturge, G. Migration Statistics. Briefing Paper Number CBP06077, 27 April 2021.	1006
	Available online:	1007
	https://researchbriefings.files.parliament.uk/documents/SN06077/SN06077.pdf (accessed	1008
	on 9 November 2021).	1009
106	Eurostat. Migration and Migrant Population Statistics, 2021. Available online:	1010
	https://ec.europa.eu/eurostat/statistics-	1011
	explained/index.php?title=Migration_and_migrant_population_statistics (accessed on 9	1012
	November 2021).	1013
107	Hu, L.T.; Bentler, P.M. Cutoff criteria for fit indexes in covariance structure analysis:	1014
	Conventional criteria versus new alternatives. Struct. Equ. Model. Multidiscip. J. 1999, 6,	1015
	1-55, https://doi.org/10.1080/10705519909540118.	1016
108	Chehtman, A.; Wolf, A. Health, Sustainability and New Priorities Drive Organic Food	1017
	Sales. 2021. Available online: https://blog.euromonitor.com/health-sustainability-and-	1018
	new-priorities-drive-organic-food-sales/ (accessed on 19 July 2021).	1019
109	.von Meyer-Höfer, M.; von der Wense, V.; Padilla Bravo, C.; Spiller, A. Mature and	1020
	Emerging Organic Markets: Modelling Consumer Attitude and Behaviour with Partial	1021
	Least Square Approach. GlobalFood Discussion Papers 2013, 26. GeorgAugust-	1022
	Universität Göttingen, Research Training Group (RTG) 1666-GlobalFood: Göttingen.	1023
	Available online:	1024
	https://www.econstor.eu/bitstream/10419/90621/1/GlobalFood_DP26.pdf (accessed on 19	1025
	July 2021).	1026
110	Zhao, J.; Dou, X. A Study of British Organic Food Market. In Proceedings of the 9th	1027
	International Conference on Education and Social Science, Shenyang, China, 29–31 March	1028
	2019; pp. 1048–1058, https://doi.org/10.25236/icess.2019.201.	1029
111	.Kobuszynska, M. Organic Market in Poland. Available online:	1030
	https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Or	1031
	ganic%20Market%20in%20Poland_Warsaw_Poland_4-10-2017.pdf (accessed on 19 July	1032
	2021).	1033

112.Luczka, W. Demand factors of development of the organic food market-A review of	1034
	1034
Polish research. Ann. Pol. Assoc. Agric. Agribus. Econ. 2019, 21, 260–276,	1035
https://doi.org/10.5604/01.3001.0013.3686.	1036
113.Biswas, A.; Roy, M. Leveraging factors for sustained green consumption behaviour based	1037
on consumption value perceptions: Testing the structural model. J. Clean. Prod. 2015, 95,	1038
332–340, https://doi.org/10.1016/j.jclepro.2015.02.042.	1039
114.Pham, T.H.; Nguyen, T.N.; Phan, T.T.H.; Nguyen, N.T. Evaluating the purchase behaviour	1040
of organic food by young consumers in an emerging market economy. J. Strateg. Mark.	1041
2019 , 27, 540–556, https://doi.org/10.1080/0965254X.2018.1447984.	1042
	1043