

Bioeconomy and the Production of Novel Food Products from Agro-Industrial Wastes and Residues under the Context of Food Neophobia

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Advances in bioeconomy lead to exploitation of wastes for the production of high added-value products. Sometimes, these products face consumer resistance due to a phenomenon known as “neophobia.” The aim of this study was the investigation of consumer acceptance/rejection of a novel food product and the segmentation of consumers according to their “food neophobia tendency.” A “functional” novel yogurt derived from halloumi whey was chosen as a hypothetical scenario. Data was collected through a survey in typical urban areas in Greece and Cyprus. Statistical analysis revealed three types of “food neophobia tendency” in each study area. Regarding the acceptability of the novel yogurt, consumers are driven by their curiosity about the taste of the novel yogurt, while the main factor of rejection was found in the absence of a health issue.

Key words: bioeconomy, consumer behavior, food neophobia, multivariate analysis, novel food product.

Introduction

Europe faces a number of major economic, environmental, and social challenges which have to be properly addressed if future generations are to enjoy a healthy, safe, and prosperous future. In this direction, Europe is setting course for a sustainable economy. A transition to an integrated bio-based economy is a way to secure this sustainable future.

Bioeconomy has become an important area of interest in the European Union and is associated with the implementation of various policies in member states. The current policy framework of the European bioeconomy consists of a multitude of strategies, incentives, and regulations from several policy areas. According to the European Commission report (EC, 2012), “the bioeconomy encompasses the production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bioenergy.” Bioeconomy can be considered a collection of sectors working in conjunction to derive products from renewable biological resources originating mainly from agriculture, forestry, fisheries, and the marine environment. The bioeconomy’s nature offers an opportunity to comprehensively address inter-connected societal challenges. Developing all sectors of the bioeconomy in concert will provide global food security, improve public health and nutrition, make industrial processing cleaner and more efficient, and make an important contribution to the effort to mitigate climate change. In this context, the

world is gradually transforming from a fossil-based economy to a circular bioeconomy.

To contribute to a greater sustainability of activities in the economy, the bioeconomy concept has to deliver more than a mere substitution of fossil resources with bio-based ones. It needs to encompass a wider transition from the current economy towards a circular flow economy based on renewable resources, with sustainability as a core principle. The transition towards a bioeconomy is characterized by uncertainty and complexity, making the design of policies particularly challenging (Purkus, Hagemann, Bedtke, & Gawel, 2018). This raises the question of under what conditions innovations may emerge and thrive which are conducive to a path transition towards a sustainable bio-based economy.

Novel Food Products

The food industry is demonstrating a willingness to put novel products on the market. The growing number of start-ups indicates that the bioeconomy is also becoming attractive for entrepreneurs. These examples show that it is gaining a stronger base and is no longer a niche sector (Schütte, 2018).

A transition towards a bio-based economy must not only be economically viable and technologically feasible, but also socially desirable (Langeveld, Sanders, & Meeusen, 2012). Consequently, this transition depends not only on the effort of policy makers or regulatory bodies, but also on the acceptance of consumers; that is why it is necessary to have a broad knowledge of con-

sumers' needs. This transition can provide sustainable solutions to global challenges if it also includes changes in consumer behavior (Arlin, 2009). In its goal to establish sustainability, the bioeconomy relies on the agriculture and food sector (Grubor, Milicevic, & Djokic, 2018). The use of industrial wastes and residues is foreseen as a promising strategy to reduce the use of both fossil and bio-based resources, supporting the transition to a bioeconomy. Using the waste products of one industry as the base material for another is a key part of the shift to a bioeconomy. From this perspective, the exploitation of wastes and residues has an important economic and environmental impact and is a desirable innovation in the frame of policies for a bio-based economy.

Introducing novel foods to consumers is likely to pose challenges, due to uncertainties which contribute to low consumption intentions (Arvola, Lähteenmäki, & Tuorila, 1999; Raudenbush & Frank, 1999; Tuorila, Meiselman, Bell, Cardello, & Johnson, 1994). Consumer tendency to show interest and hesitation towards novel foods (Rozin & Vollmecke, 1986) adds a layer of complexity to studies of novel food acceptance. Consumers tend to base their decisions on their pre-consumption beliefs (Steenkamp, 1990), which could result in the rejection of beneficial food (Tan, Fischer, van Trijp, & Stieger, 2016). Food acceptance and rejections are motivated by a combination of reasons (Rozin & Fallon, 1987). The degree to which these motivations contribute to the food choice decision depend on the type of food and level of familiarity (Martins & Pliner, 2005; Pliner & Pelchat, 1991), as well as the cultural context (Hartmann, Shi, Giusto, & Siegrist, 2015; Tan et al., 2015).

Food Neophobia and Food Technology Neophobia

Santeramo et al. (2018) noticed that food industry suffers a market failure rate, partly due to a phenomenon known as "neophobia." Neophobia is the rejection some consumers express towards novel or unfamiliar food products. The food industry needs more systematic knowledge of consumer behavior, especially its basis in perceptions of benefits and food risks (Castenmiller, Fenwick, Lindsay, & Maat, 2008).

According to Henriques, King, and Meiselman (2009), food neophobia has been a subject of study with most of the research focused in children. Nevertheless, food neophobia persists into adulthood, and thus forms one dimension of consumer behavior (Henriques et al., 2009) which has been associated with some challenges

such as restricted food choices, compromised quality of diets, and less variety (Falciglia, Couch, Gribble, Pabst, & Frank, 2000; Pliner & Salvy, 2006). Research on food neophobia was aided by the development of the food neophobia scale or FNS (Pliner & Hobden, 1992), around 26 years ago. It has been used widely and provided reliable results (Galloway, Lee, & Birch, 2003; Knaapila et al., 2007; Mustonen, Oerlemans, & Tuorila, 2012; Olabi, Najm, Baghdadi, & Morton, 2009; Ritchey et al., 2003; Rubio, Rigal, Boireau-Ducept, Mallet, & Meyer, 2008).

The FNS consists of 10 items (statements) concerning neophobic behavior, which respondents indicate agreement or disagreement with, measured on a 7-point scale. Several studies on food neophobia using the FNS show large individual variation in study populations. The variation indicated in these studies were related to culture (Ritchey et al., 2003), socio-economic status (Flight, Leppard, & Cox, 2003), and demography using mainly gender and age (Pelchat & Pliner, 1995; Pliner, 1994; Pliner & Loewen, 1997). According to Damsbo-Svendsen, Frøst, and Olsen (2017), in the majority of the western societies, the availability of novel foods has markedly increased, and the interpretation of what "novel" foods are has changed since the FNS was developed. The development of the FNS encouraged an increase in research into neophobia but very little published research has been aimed at product development (Henriques et al., 2009). Since food neophobia can influence preferences toward novel foods (Tuorila, Lähteenmäki, Pohjalainen, & Lotti, 2001), food product developers and marketers are always faced with an important issue of understanding its potential impact on consumers' food selections.

According to Cox and Evans (2008), the FNS is less suitable for assessing acceptance of foods produced by new technologies. New food technologies promote innovation in the food sector, but not all are easily understood and equally accepted by consumers because they cause resistance (Siegrist, Hartmann, & Sütterlin, 2016). Some studies found that acceptance of new food technologies is due to heterogeneous attitudes and preferences among consumers, which may affect their food choices (De Steur, Odongo, & Gellynck, 2016; Frewer et al., 2013; Pliner & Salvy, 2006; Ronteltap et al., 2007; Schnettler et al., 2016; Vidigal et al., 2015). Socio-demography is one of the variables that relates to food neophobia and food technology neophobia (Chen, Anders, & An, 2013; Jeżewska-Zychowicz & Korólak 2015; Vidigal et al., 2014, 2015). The food technology neophobia scale (FTNS) is a tool with 13 statements

which also measures respondents' agreement on a 7-point scale. It was developed and validated by Cox and Evans (2008) to identify neophobia in relation to new food technology (food technology neophobia). This was after a food neophobia scale (FNS) developed by Pliner and Hobden (1992), as this scale was a less suitable tool to determine receptivity to foods produced by new different technologies. The FTNS instrument was constructed to establish the acceptance limits of foods produced by new technologies, by identifying segments of the population that have greater or lesser neophobia. The ability to determine groups that are willing to accept novel food produced by new technologies can be helpful, especially when such foods and new food technologies provide benefits (Evans, Kermarrec, Sable, & Cox, 2010).

The aim of this study is the segmentation of consumers according to "food neophobia tendency" and then the investigation of consumer acceptance or rejection of a novel food product. A "functional" yogurt derived from halloumi whey was chosen as a hypothetical scenario. These research findings might be a first step in Greece and Cyprus, for a better understanding of consumers' reactions towards foods derived from wastes and residues and their future marketplace acceptance.

Methodology

Quantitative analysis was used, based on 545 questionnaires conducted with randomly selected consumers in the urban areas of Thessaloniki, Greece and Limassol, Cyprus. This is achieved by collecting data through a large-scale survey carried out in the period June-August 2017 in Limassol (222 sample size) and in the period April-June 2018 in Thessaloniki (323 sample size). The aims of the research were i) the examination of the current attitude of consumers towards the adoption or not of a novel yogurt derived from agro-industrial wastes and residues and the factors responsible for each behavior (acceptance/rejection), ii) the classification of participants according to the "food neophobia tendency," and iii) the presentation of the findings in a comparative form for the study areas.

In order to achieve the mentioned aims, a hypothetical scenario was used. The content of it was about a novel "functional" yogurt that contains dietary fibers, natural flavorings with fruity aromas (banana flavor), and beneficial microbial cultures derived from halloumi whey and enriched with by-products (e.g., peel) of banana processing. Halloumi cheese is a traditional semi-hard non-fermented cheese produced in Cyprus. It

can be made using sheep and goat milk or a mixture of these with cows' milk. The increase in production of halloumi cheese has led to excess whey (whey is the main liquid by-product of the dairy manufacturer) which cannot be absorbed, and its disposal represents a huge obstacle for dairy industry. Compared to other regions, whey from Cypriot dairies presents high lactose content and therefore great potential for product-driven biorefining. Thus, consumer willingness to adopt this novel yogurt was investigated as well as the reasons for acceptance or rejection. At this point, it is worth mentioning that, before the personal interview, a question about consumption frequency with respect to yogurt was raised. If participants included yogurt to their diet in general, they were included in the survey. Thus, those who did not consume yogurt were excluded from the survey.

From a technical-architectural point of view, the design process of the questionnaire included sections on i) food neophobia and food technology neophobia; ii) willingness to adopt the novel yogurt; iii) acceptance reasons of the novel yogurt; iv) rejection reasons of the novel yogurt; and v) questions relating to gender, age, educational level, marital status, occupation, annual family income, and several other questions about consumption frequencies (yogurt, banana, etc.), healthy characteristics of foods, labels of foods, environmental impact of food choices, food miles, and food waste, variables which are part of a larger research for the European H2020 project SYBAWHEY and have not been included. In the present study, the description is limited to the variables of interest.

Prior to sampling, a small scale preliminary field qualitative research was conducted in June 2017. Focus group interviews were used as the qualitative method of data collection in this study. Two focus group interviews were conducted in Limassol, Cyprus, during June 2017, with twenty consumers divided into two separate groups. The purpose of the focus group discussion was to establish the questionnaire for the quantitative research, which resulted in some minor improvements and enhanced the functionality of the questions being asked.

Study Areas

Study areas for this research were defined by European H2020 project SYBAWHEY, as Greece and Cyprus are partnership members. Thessaloniki is the second largest city in Greece, located in the region of Central Macedonia in the northern part of Greece, with over one million

Table 1. FNS and FTNS survey questions.

1. I am constantly sampling new and different foods (R).
2. I don't trust new foods.
3. If I don't know what is in a food, I won't try it.
4. I am afraid to eat things I have never had before (R).
5. I will eat almost anything (R).
6. There are plenty of tasty foods around, so we don't need to use new food technologies to produce more.
7. The benefits of new food technologies are often grossly overstated.
8. New food technologies decrease the natural quality of food.
9. There is no sense in trying out high-tech food products because the ones I eat are already good enough.

**Items followed by (R) indicate that they are reversed when scoring.*

inhabitants in its metropolitan area. Thessaloniki is Greece's second major economic, industrial, commercial, and political center. Limassol is a city on the southern coast of Cyprus and capital of the eponymous district with the second largest urban area in Cyprus after Nicosia. The town of Limassol is the biggest industrial center of the province and is an important trade center of Cyprus. These study areas have been selected as one of the most characteristic areas of each country, while they also include a very large urban center located in the center of its map.

Measures

The food neophobia scale (FNS) consists of 10 statements and food technology neophobia scale (FTNS) consists of 13 statements, scored by a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Food neophobia in this study was measured by using five items and food technology neophobia was measured by using four items selected from the widely used scales (Cox & Evans, 2008; Pliner & Hobden, 1992). Several CatReg models for FNS and FTNS were applied. Based on the results, the set of variables with the best statistical behavior has been selected. The selected set of variables extracted the higher R^2 (the same for two-step clustering). Thus, due to the minimum number of FNS and FTNS variables included at this study, the profiles of consumers were labeled as "food neophobia tendency." A 5-point scale was used instead of the 7-point scale traditionally used with the FNS and FTNS (Table 1). Regarding consumers' perception about the novel yogurt, a set of variables was used as a tool to measure acceptability and rejection. These variables were based on previous studies (Barrera & Sánchez, 2013; Sijtsema et al., 2016; Tan et al.,

2016), adapted to cultural context and specific characteristics of diet (Mediterranean) of consumers in the study areas. About the measurement of these variables, the mean value for each set of variables was used. In particular, a Likert scale was applied ranging from 1 (strongly disagree) to 5 (strongly agree) and then the mean score was calculated. The coding of some questions was reversed. The purpose is that generally respondents tend to express agreement to a larger extent than disagreement on Likert scales (Spector, 1992).

Statistical Analysis

Statistical analysis was performed using SPSS Statistics, version 24.0 (for Windows). Classification of individuals regarding neophobia in relation to food neophobia and food technology neophobia is obtained by using two-step cluster analysis (TSCA). The TSCA was first employed as a scalable cluster analysis algorithm designed to handle large datasets, revealing natural groupings within a data set that would otherwise not be apparent (Siardos, 2002, p. 56). Categorical regression (CatReg) analysis was used to the results of TSCA, in order to explore in depth, the possible associations between the variables of the study and to explain the clustering results. Although the chosen empirical techniques are rather novel in food neophobia issues, they have been selected due to their ability to optimally handle categorical variables. Prior to the CatReg model, a reliability analysis (Bohmstedt, 1970) was used to determine the extent to which these nine items (chosen as predictors of the type of tendency to neophobia) are related to each other. The value of Cronbach's alpha (α) reliability coefficient was found equal to 0.552 for the Greek sample and for the Cypriot sample it was found equal to 0.442, indicating satisfactory internal reliability.

Results

According to the descriptive statistics analysis, the main research findings are presented in three sections i) "food neophobia tendency" profiles and the relative importance measures for this classification, ii) factors of consumer acceptance (Figure 3), and iii) factors of consumer rejection of the novel yogurt (Figure 4). This section begins with a brief socio-demographic description of the survey samples. The mean participant in Greece is an unmarried female, 35.3 mean years of age, with a high level of education (university degree). Most participants are private employees with an annual family income of €10,001-€15,000. No important differ-

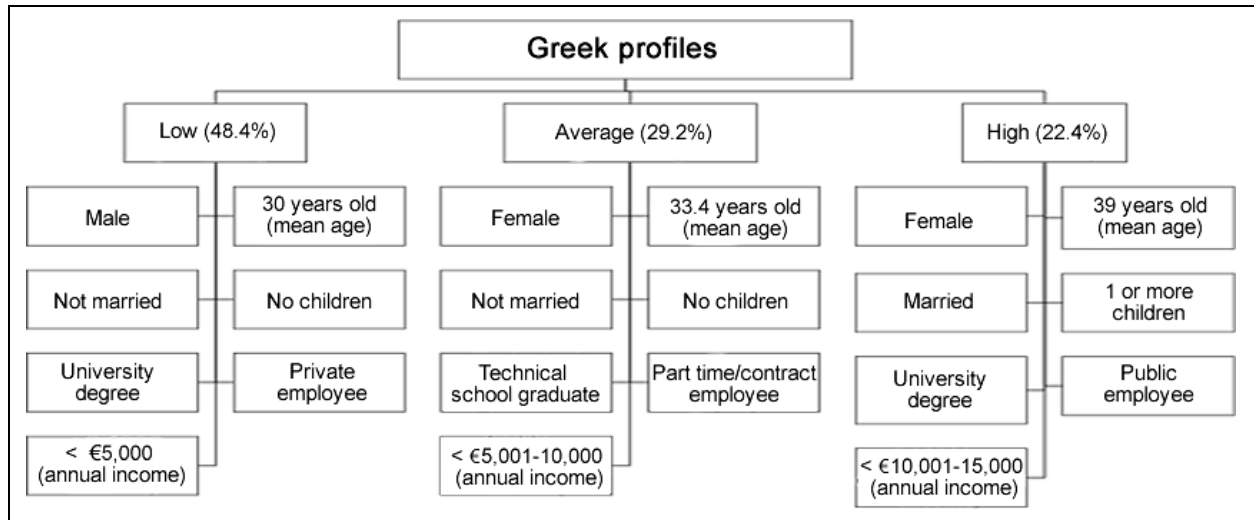


Figure 1. Greek profiles of “food neophobia tendency.”

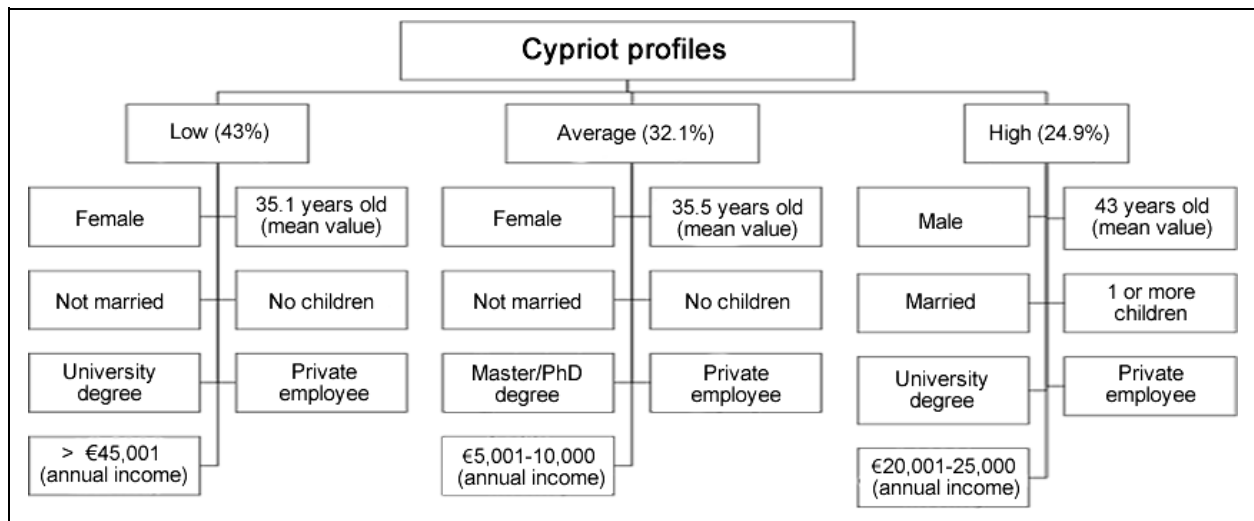


Figure 2. Cypriot profiles of “food neophobia tendency.”

ences were found in Cyprus, except the marital status of the mean participant (married).

The results of TSCA for the classification of each sample according to “food neophobia tendency” led to clusters with different consumer profiles. Analyzing the outcomes, it becomes obvious that consumers comprise three distinct clusters for each sample in terms of “food neophobia tendency.” For the Greek sample, the group with “low” tendency consists of the first cluster (48.4%), the second cluster can be labeled as “high” tendency to food neophobia (22.4%) and the “average” food neophobia tendency group consist of the third cluster (29.2%). On the other hand, analysis of the Cypriot sample raises the first cluster (24.9%) with a “high” food neophobia tendency, while the second cluster pre-

sented “low” food neophobia tendency (43%). The third cluster has an “average” food neophobia tendency, accounting for 32.1%. Analysis of both samples showed that the variables which belong to “food technology neophobia” scale are of greater importance. This suggests that the majority of each sample express phobia for the production process of novel foods rather than a general phobia for novel foods as such; this may impact the degree to which a novel product is accepted or not by consumers.

Then, using descriptive statistical analysis, each cluster of “food neophobia tendency” has been profiled.

Table 2. Relative importance measures of Greek sample.

	Correlations and tolerance					
	Correlations			Importance	Tolerance	
	Zero-order	Partial	Part		After transformation	Before transformation
Gender	0.269	0.354	0.180	0.066	0.907	0.857
Age	0.408	0.823	0.689	0.469	0.600	0.887
Marital status	-0.151	0.544	0.308	-0.074	0.656	0.895
Children	0.168	0.678	0.439	0.107	0.787	0.899
Educational level	0.310	0.715	0.487	0.217	0.811	0.856
Occupation	0.080	0.619	0.375	0.042	0.854	0.889
Annual family income	0.304	0.664	0.422	0.174	0.912	0.831

Dependent variable: TwoStep cluster number

Table 3. Relative importance measures of Cypriot sample.

	Correlations and tolerance					
	Correlations			Importance	Tolerance	
	Zero-order	Partial	Part		After transformation	Before transformation
Gender	0.097	0.038	0.018	0.002	0.890	0.766
Age	0.331	0.795	0.611	0.312	0.690	0.734
Marital status	0.220	0.552	0.309	0.095	0.840	0.824
Number of children	0.101	0.308	0.151	0.020	0.956	0.764
Educational level	0.291	0.779	0.581	0.249	0.752	0.701
Occupation	0.007	0.623	0.372	0.004	0.805	0.854
Annual family income	0.390	0.786	0.594	0.319	0.862	0.708

Dependent variable: TwoStep cluster number

Figures 1 and 2 present the socio-demographic characteristics (gender, age, marital status, number of children, educational level, occupation, and annual family income) of each cluster. As we can observe, clusters show some similarities and differences between the samples. The differences which shape the clusters of each sample are of high importance. Hence, among the Greek and Cypriot samples, the clusters with “low” food neophobia tendency show important differences in gender, age, and annual family income. The “average” food neophobia tendency clusters show such differences in educational level and occupation, while the “high” food neophobia tendency clusters present noteworthy differences in gender and annual family income. It becomes obvious that the dominant socio-demographic characteristics which determine each cluster are gender, age, educational level, occupation, and annual family income. This information is valuable for the marketing of the novel yogurt, as market developers will not address consumers as a unit but as groups with special characteristics.

Investigating further the “food neophobia tendency,” in order to find out how it is influenced by personal

characteristics, a CatReg model was employed. For the Greek sample, the CatReg model yielded a value of coefficient of multiple determination $R^2=0.774$ which indicates that 77.4% of the variance of the transformed values of the dependent variable are explained by the transformed values of the independent variables of the regression equation. While examining the relative importance measures of the independent variables (Pratt, 1987) that refer to the “food neophobia tendency,” the relative importance of independent variables show that the most influential factors predicting “food neophobia tendency” correspond to “age” (accounting for 46.9%), followed by “educational level” (21.7%), “annual family income” (17.4%), and “number of children” (10.7%; see Table 2). The presentation of the results is narrowed only by the relative importance measures, while 96.7% of the variation in the dependent variable is cumulatively explained by the above independent variables.

The Cypriot sample yielded a value of coefficient of multiple determination $R^2=0.782$. The relative importance measures of the independent variables show that the most influential factors correspond to “age”

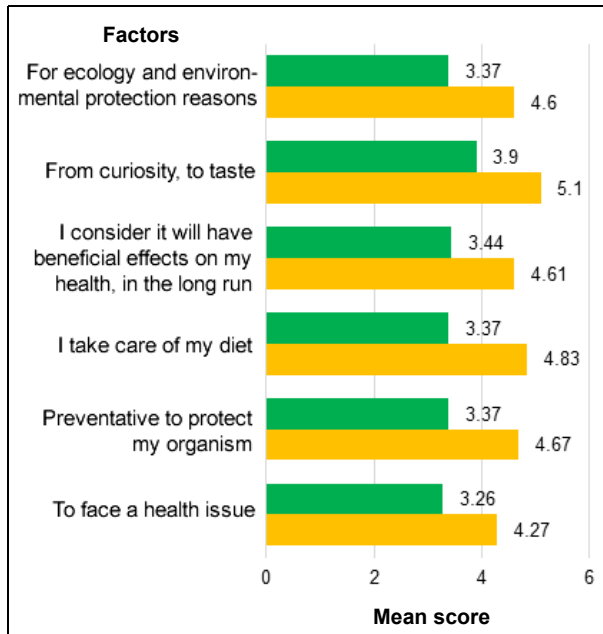


Figure 3. Acceptance factors of novel yogurt.

accounting for 31.2%, followed by “educational level” (24.9%) and “annual family income” (31.9%; see Table 3). In this sample, 88% of the variation in the dependent variable is cumulatively explained by the above independent variables.

As already noted above, food innovations are often rejected by consumers as a result of phobia towards novel foods. Regarding the willingness of adoption and reasons for each behavior, both samples presented a high rate of adoption (57.9% for the Greek sample and 63.9% for the Cypriot sample) of the novel yogurt. Figure 3 presents the main factors influencing consumer acceptance of the novel yogurt (blue line corresponds to the Greek sample and grey line to the Cypriot sample). In particular, the most important reason was found to be the curiosity about the taste of the yogurt (5.1 and 3.9 mean score respectively in each sample). In addition, many consumers indicated that health benefits (“I take care of my diet,” “Preventative to protect my organism,” “I consider it will have beneficial effects on my health in the long term,” “To face a health issue”) and environmental issues also important reasons of acceptability. About the rest of consumers which they were not willing to adopt the novel yogurt or they were not sure, the most important factor was found in the absence of a health issue, (“I have no health issues,” 5.01 and 3.46 mean score respectively to each sample), followed by factors such as the lack of perceived benefits of the novel yogurt (“I don’t think it will provide benefits to

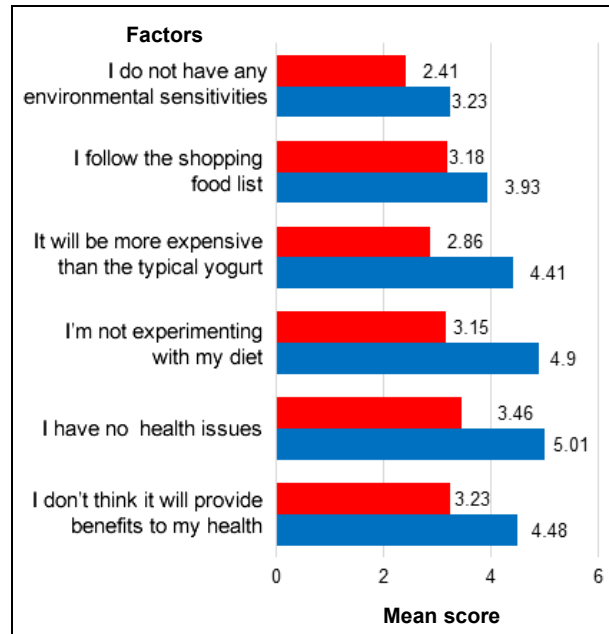


Figure 4. Rejection factors of novel yogurt.

my health”), the unwillingness for diet experiments (“I’m not experimenting with my diet”), the predefined shopping food list (“I follow the shopping food list”), the price of the novel yogurt (“It will be more expensive than the typical yogurt”), and the environmental issue (“I do not have any environmental sensitivities”; see Figure 4).

Discussion and Conclusions

On a global level, natural resources are subject to steadily increasing demands from a growing population. Managing natural resources sustainably is a vital start, but the whole supply chain must also be sustainable in order to ensure food security, supply sufficient quantities of renewable raw materials and energy, reduce environmental footprints, and promote a healthy and viable economy. Nowadays, the development of sustainable processes requires the efficient exploitation of food processing residues and maximization of the value derived from such waste sources. It is more efficient to maximize the value of industrial wastes and residues than reduce the cost of management and disposal. Using the waste products of an industry as the base material for another is a key part of the shift to a bioeconomy, receiving increasing attention as alternative raw materials in recent years. However, these products often face consumer resistance due to a phenomenon known as

“neophobia,” which is defined as a reluctance to eat unfamiliar foods.

In the current analysis, survey information from consumers has been analyzed using TSCA, CatReg models, and descriptive statistics analysis in order to identify consumer profiles according to the “food neophobia tendency” and to examine the willingness to adopt a novel yogurt as well as the factors responsible for each behavior. This study revealed three profiles according to the “food neophobia tendency” (“low,” “average,” and “high”). Both samples express a “low” to “average” neophobia tendency, accompanied with a high rate of adoption of the novel yogurt. Consequently, it could be said that the high rate of novel food acceptability is linked to a low neophobia tendency or the reverse.

Demographic characteristics of “age,” “educational level,” “annual family income,” and “number of children” dominate in the Greek sample while “age,” “educational level,” and “annual family income” are dominant in the Cypriot sample for the aforementioned classification. Analysis of the variables that shape the profiles of consumers found that the variables which belong to the food technology neophobia scale are of great importance. Thus, it could be concluded that the majority of each sample express phobia for the production process of novel foods. Additionally, the profiling of each cluster of “food neophobia tendency” (personal characteristics) leads to the conclusion that food marketing experts have to adapt the entry of the novel yogurt according to the special feature of each cluster. This can be achieved via targeting advertisement and other promotional, communication, and positioning strategies most appropriately. A more successful positioning and a growing marketplace acceptance of wastes and residues as raw material for food may help to pave the way towards ensuring global food security and a bio-based economy. It should not be forgotten that there is a segment of consumers playing an essential role in the success of a product in marketplace, as they legitimize the product to other consumers. Positive outcomes in terms of novel foods acceptability derived from agro-industrial wastes and residues as a foodstuff may contribute to the development of bioeconomy and sustainability in societies. The results showed that adoption decisions regarding the novel yogurt have an unexpected component. This study evinced that curiosity was the key driver in acceptability of the novel yogurt, rather than the received health benefits, as the novel yogurt is “functional” food which improves health properties.

In summary, the current results provide some guidance for the food sector and the food industry, in the

terms of bioeconomy, about the acceptance of a novel food from wastes and residues and also the target group of the market. Additionally, the focus on consumer attitudes may provide further input to food producers and scientist decisions to invest in the exploitation of cheese whey in general. Methodological speaking, the combined application of TSCA and CatReg allows for the segmentation of consumers as well as the discovery of the factors that shape the aforementioned segmentation.

Research on food neophobia is minimal and is primarily limited to north-central European populations, indicating a need for further research. This study sheds light on a topic that has not been studied in Greece and Cyprus. Classification of consumers according to “food neophobia tendency” constitutes the first research attempt on this subject in combination with the willingness to adopt a novel product. Given the limited number of studies, it could be said that this is also its contribution to the literature and its originality, providing also a theoretical and methodological platform for further research.

Finally, limitations of this study should be mentioned. This study, as a first attempt in Greece and Cyprus to classify consumers according to “food neophobia tendency,” is limited to a rather small sample in urban centers. Moreover, specific characteristics of consumers living in the study areas might also confine the generalizability of the results. By focusing on a novel food product as a hypothetical scenario, the authors are unable to generalize these findings to other novel foods or the food market in general. It would be therefore useful to corroborate the results by extending the scope of the research to other geographical areas and other food innovations. Nevertheless, the observations made in this study provide a beginning for further research which could extend the investigation to a more representative sample and provide valuable information.

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