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Sustainable Food Consumption and the Attitude–Behavior Gap: Factor Analysis and Recommendations for Marketing Communication

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Abstract

Sustainable protein consumption is a key element in the transition toward more environmentally responsible food systems. Poultry, due to its relatively low carbon footprint and favorable health profile, holds significant potential to become an important component of the so-called "protein transition." The aim of this article is to identify cognitive factors influencing consumer purchasing decisions regarding poultry and to formulate recommendations for marketing communication strategies that position poultry as a choice aligned with sustainability goals. This study is based on an exploratory factor analysis (EFA) conducted on a nationally representative sample of Polish consumers (AgriFood 2024). The results revealed three dominant decision-making determinants—taste, health, and convenience—collectively forming the original THC (Taste–Health–Convenience) model. This model provides a novel interpretive framework, showing how sustainability issues can be communicated through immediate, personally relevant consumer benefits, and subsequently expanded to include environmental and ethical aspects. The findings indicate that effective communication should emphasize tangible, everyday consumer benefits while also leveraging poultry's lower climate impact compared to red meat. This article makes an original contribution to the debate on sustainable diets by presenting the THC model both as a tool for explaining the mechanisms of the attitude–behavior gap and as a practical instrument for designing campaigns that support the implementation of SDG 3 and SDG 12.

Keywords: poultry; sustainability; consumer perception; factor analysis; consumer behavior; eco-labeling; marketing communication

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1. Introduction

Human life consists of countless daily choices, varying in significance and awareness. The importance of a decision often depends on its immediate impact on the individual. Consumer product choices are mainly shaped by tangible factors such as price, sensory appeal, preferences, or personal values. The wide variety of products increases decision-making complexity and the range of criteria considered, which may vary by use or purchase frequency [1]. Food products, including those from agriculture, form a key category. Poultry production plays a major role in the global food system, providing a primary source of high-quality animal protein through meat and eggs [2]. Agricultural products, including poultry meat production, are part of nutrition, which is linked to all Sustainable Development Goals, highlighting the broad impact of the food sector [3].

With regard to the protection of the natural environment sustainable development has become a key global strategy, embedded in treaties, national laws, and applied in business, agriculture, industry, and urban planning [4–10]. Referring to the report published by the World Commission on Environment and Development in 1987, *Our Common Future*, sustainable development is defined as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs..." [11]. The negative consequences of everyday decisions—often driven by low awareness—have long been recognized and are now addressed in the 2030 Agenda for Sustainable Development. This agenda was adopted by all United Nations member states in 2015 with the overarching goal of achieving global peace and prosperity [12]. The 2030 Agenda outlines 17 Sustainable Development Goals (SDGs) and 169 specific targets aimed at driving progress toward sustainability. In the context of this article, two goals are particularly relevant: SDG 2 and SDG 12. SDG 2 focuses on ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture [13]. SDG 12, on the other hand, addresses the need for sustainable production and consumption patterns—especially in light of the limitations posed by arable land and the environmental challenges of increased food production. Govindan [14] highlights the synergistic interdependence between these two goals, arguing that responsible production systems can significantly enhance food security. Current approaches to food production are degrading both terrestrial and aquatic ecosystems, contributing to species loss and accelerating climate change [15,16].

Animal-based products are often criticized for their significant environmental impact, such as greenhouse gas (GHG) emissions, water use, land use, and feed resource consumption [17–19]. However, it is worth noting that within the meat group there is considerable variability, with poultry production being associated with lower environmental costs compared to beef or lamb [17]. Poultry is one of the more 'flexible' types of meat in the context of the transition towards sustainable practices, due to better manure management, feeding, intensive systems, and feed modifications [20]. Thus, based on a review of the literature, it should be emphasized that poultry consumption contributes to the protection of the natural environment through: lower greenhouse gas emissions compared to red meat production [17,18]; better feed efficiency [19]; lower land use and land conversion [17]; reduced energy and water use compared to red meat [20]; as well as processing potential, production systems, and innovation [17]. Nevertheless, when compared with plant-based protein, poultry generates a higher environmental impact. In the search for solutions to mitigate these negative consequences, the concept of the "protein transition" has gained increasing attention. The term is now widely discussed in scientific literature [21], political discourse, the non-profit sector, and industry settings alike [22]. The protein transition is typically associated with three overarching goals:

1. Reducing environmental impact,
2. Improving dietary health,

3. Enhancing the ethical dimensions of food production (e.g., animal welfare, fair labor practices, and addressing the disproportionate health and environmental burdens caused primarily by consumption in high-income countries) [22].

The use of the term "protein transition" ranges from the complete elimination of animal-based products to a more sustainable and/or ethical reform of animal production systems [21]. It is important to note that references to "protein" in this context include both animal-based foods and their potential substitutes. The negative consequences of high consumption of animal-based products include health issues on the consumption side (such as diet-related chronic diseases) [23,24] as well as zoonotic risks on the production side. In light of these concerns, studying consumer behavior becomes essential, as it provides insights into the current situation and helps identify areas that require transformation. This analysis makes it possible not only to capture the dominant consumer motivations but also to explain why, despite a declared support for the idea of sustainable development, other purchasing criteria are often chosen in practice. In this way, such studies contribute to filling the research gap in understanding the mechanisms that sustain the dissonance between attitudes and behaviors in sustainable food choices. The present study focuses on the purchasing behavior of poultry consumers, given that meat remains a central part of many diets, and poultry—compared to red meat—is generally considered a healthier option with a significantly lower environmental impact. The aim of this article is to identify the cognitive factors underlying consumer choices related to poultry and to propose marketing communication strategies that promote poultry as a more sustainable dietary option, which contributes to supporting the achievement of SDG 2 and SDG 12.

1.1. Livestock Production and Global Food Security in the Context of Sustainable Development

Food security is a complex phenomenon, strongly interconnected with sustainable development, social equity, and broader socio-economic determinants [25]. Research suggests that the effectiveness of food systems should be assessed not only by the quantity of food produced but also by its nutritional quality and impact on societal and environmental well-being [26]. Livestock plays an important role in global food systems, providing, on average, around 16% of the energy in human diets [25,27]. Their relevance is particularly high in developing countries, where animal-based products are often the main source of protein. In recent decades, intensive livestock systems have rapidly developed, leading to increased production efficiency of meat, milk, and eggs [28]. At the same time, the livestock sector faces significant challenges related to sustainability, ethical production practices, and the health consequences of excessive meat consumption. According to the 2019 EAT-Lancet Report, reducing the intake of red and processed meats in favor of legumes, whole grains, and vegetables can help lower greenhouse gas emissions and improve public health outcomes [29]. The European Union has adopted regulations aimed at reducing the environmental impact of animal production, improving animal welfare standards, and limiting the use of veterinary medicines that may pose risks to human health [30]. The United Nations Sustainable Development Goals (SDGs) emphasize the need to change patterns of food production and consumption to make them more sustainable in light of climate change, biodiversity loss, and pollution [31]. The livestock breeding and meat processing sectors are working to reduce their environmental impact, increase animal welfare, and improve food security and safety, in order to meet social demands. Many countries are introducing strategies and programs aimed at transforming food systems towards sustainability: European Union—under the European Green Deal, it is implementing the "Farm to Fork" strategy, which includes, among other measures, reducing the use of pesticides by 50% by 2030, reducing fertilizer use by 20%, and increasing the share of organic farming to 25% of agricultural land area [32]. China—pursues the policy

of "ecological civilization," under which it develops precision agriculture, reduces water and chemical fertilizer use, and supports investment in low-emission agriculture. Since 2005, China has reduced water consumption per unit of agricultural GDP by over 40% [33]. Brazil—is developing so-called ILPF systems (integrated crop-livestock-forestry), which combine plant, animal, and forestry production on the same land. This increases land productivity while simultaneously reducing deforestation and soil degradation [34].

The Netherlands—as one of the leaders in agricultural innovation, promotes cultivation in closed systems using greenhouse technology with water and nutrient recirculation. As a result, despite its limited land area, the Netherlands is the second-largest exporter of agricultural products in the world [35]. In this context, it becomes essential to continuously monitor the impact of individual sectors of the food economy on the natural environment, as well as to undertake educational and legislative measures to promote sustainable models of consumption and production.

1.2. Sustainable Diets and Changes in Dietary Behavior: The Role of Poultry in a Balanced Diet

The food we rely on for daily functioning is gaining increasing importance across various scientific disciplines. Dietary choices have far-reaching consequences for consumer behavior, influencing the economy, social and environmental equity, and ultimately shaping nutritional and health outcomes [36]. Such a broad impact of consumed products is associated, among other things, with the emergence of the concept of a sustainable diet, that is, one which has a low environmental impact, contributes to food security and health; is culturally acceptable, economically fair, accessible, affordable, nutritious, and safe; and also respects biodiversity and ecosystems [3]. A review of the literature addressing the definition of a sustainable diet indicates that it is a diet combining health aspects (nutritional adequacy), environmental aspects (environmental sustainability), as well as cultural and economic dimensions [37]. Referring to the sustainable diet, it is difficult not to mention sustainable food and organic food. The former often constitutes a component of a sustainable diet—a component that should be produced in a sustainable manner, meaning that food as a product meets environmental, economic, health, and social criteria. Genova and Allegretti [38], in their article, point out that consumers define sustainable food as food that is free from chemicals, reduces water and energy consumption, is produced locally and seasonally, and involves minimal use of packaging and processing. With regard to organic food, Hallmann [39] defines it as products manufactured in accordance with organic production standards, which regulate the limitation or exclusion of synthetic pesticides, chemical fertilizers, growth hormones, antibiotics (in animal husbandry), and promote the use of natural, biological, and mechanical methods. Organic food is also a certified product—that is, one that has undergone the entire process of production, harvesting, processing, distribution, and labeling in compliance with regulatory frameworks (e.g., EU regulations, national standards, IFOAM) [40].

Meat has long been regarded as "fuel" for the human body and one of the best sources of energy for humans [41]. From a nutritional perspective, it is an essential component of the human diet, providing a significant source of complete protein (with a full amino acid profile), along with a wide range of micronutrients: iron, zinc, calcium, folic acid, selenium, as well as vitamins (B6, B12, D) and polyunsaturated omega-3 fatty acids. The literature emphasizes that these components not only help prevent nutritional deficiencies but may also have anti-cancer properties and protect against other chronic diseases [42–44]. From both a physiological and evolutionary standpoint, humans have digestive and metabolic capacities that allow efficient absorption and use of nutrients from meat, which justifies its long-standing role in the diet. Nevertheless, although meat does not have to be the preferred element of a diet, its nutritional value is indisputable and deserves recognition in the

planning of sustainable diets [43,44]. However, from a public health perspective, it should also be noted that meat is susceptible to contamination during production, processing, storage, transportation, and marketing [45]. Research indicates the negative impact of red meat consumption on human health, which has contributed to the perception of poultry as a healthier alternative [46]. Consumer demand for meat and its characteristics has changed over the years and has been influenced by numerous internal and external factors, including psychological, sensory, and marketing-related aspects [47]. It is also important to note that the qualities consumers expect from meat vary between countries and even within regions of the same country [48–50]. Recently, increasing attention has been directed toward external attributes such as animal welfare, sustainability, and "ethical" meat production [51].

As of 2020, poultry has become the most consumed meat globally, a trend expected to continue, accounting for 52% of additional meat consumption between 2021 and 2030 [52]. Its popularity stems from lower prices, consistent quality, versatility, and a favorable protein-to-fat ratio, as well as shifting consumer habits for economic and health reasons [52]. These choices have global implications, prompting calls to align population growth with food production and transform food systems [53]. Nutrition is linked to all Sustainable Development Goals, underscoring the food sector's broad impact [54]. Poultry can form part of a sustainable diet and may be assessed as sustainable food in comparison with other animal-based products. However, this is dependent on multiple factors. Poultry production is among the efficient sources of high-quality animal protein. Compared with ruminants, for instance, poultry has a shorter production cycle and often demonstrates better feed-to-meat/egg conversion, which translates into lower resource use per unit of product [55]. Moreover, in poultry farming part of the standard feed is replaced with alternative raw materials (such as agricultural by-products or locally sourced inputs), which reduces dependence on imported, energy-intensive feedstuffs and lowers environmental impact [55,56]. A significant determinant of whether poultry can be classified as organic food is the type of production system—conventional or organic. The literature review on this subject highlights both the advantages and disadvantages of each production system. The studies presented indicate that organic poultry, although more expensive and often less efficient in certain indicators (e.g., productivity), better aligns with many aspects of sustainability and may be considered more environmentally friendly [57]. Thus, poultry originating from production systems that minimize negative environmental impacts (e.g., improved feed, local production, shorter transport), ensure animal welfare, utilize sustainable raw materials, reduce waste, and operate under certification, can be regarded as organic food.

A new trend in meat consumption is emerging in Poland. The majority of Poles declare a willingness to reduce their meat intake, while simultaneously stating that they do not wish to become vegetarians or vegans [58]. According to data from 2021 [59], aside from the most commonly cited health-related reasons (53%) and improved personal well-being (42%), additional explanations for this downward trend in meat consumption included: concern for animal welfare (31%), lack of trust in agricultural products (31%), environmental concerns (30%), preference for the taste of plant-based foods (26%), dietary changes among relatives (19%), and financial considerations (10%). Nevertheless, the overall quantity of meat consumed in Poland still exceeds the targets set for a sustainable diet [60]. A noticeable popularity of poultry meat can also be observed, aligning with global trends that indicate poultry is increasingly replacing other types of meat [61]. A particularly significant rise in poultry meat production occurred between 1994 and 2014 [62]. Based on the same source, this growth was driven by the popularity of poultry due to its relatively lower price and perceived health benefits. On the supply side, contributing factors include

a short production cycle, lower production costs compared to other EU countries, and demand from other EU member states [63]. Poultry and sheep farming are also considered to play a role in improving environmental outcomes, resource efficiency, and biodiversity. Despite the above trends, research shows that Poles still consume red meat (pork, beef, veal, and lamb) more frequently than white meat (poultry and rabbit) [64].

1.3. The Attitude–Behavior Gap in Sustainable Food Choice

In the context of sustainable food choices, research shows that consumer values-such as ecological and health consciousness-translate into dietary attitudes, which in turn influence both purchase intentions and actual behavior. However, in many cases, a so-called "attitude–behavior gap" is observed [65,66]. For instance, although consumers often declare positive attitudes toward organic food, actual purchases of such products particularly in categories like meat, processed foods, or sweets-remain low [65,66]. The choice of diet is also closely linked to public health and broader food security, both of which are influenced by income levels and their distribution within the population. This makes diet affordability a critical challenge [67]. A systematic review of the literature indicates that only studies addressing diet quality, environmental impact, and cost simultaneously can provide a comprehensive perspective-yet such studies remain scarce [67]. Analysis also suggests that shifting toward a healthier and more environmentally sustainable diet often requires reducing the intake of animal-based products, replacing them with plant-based protein sources, and limiting highly processed foods [66,68]. Food consumption is influenced by a wide range of factors, including physical and economic food availability, policy frameworks, culture, personal attitudes, and dietary preferences [66,69,70]. European studies have shown that perceived barriers, such as lack of willpower, time constraints, taste preferences, and high prices of healthy food are strongly associated with lower consumption of fruits, vegetables, and fish, and a higher tendency to choose fast food [70]. Moreover, habit strength has proven to be a stronger predictor of actual food consumption than either intentions or attitudes [70]. Studying consumer behavior and the factors influencing sustainable food choices is crucial for developing effective strategies that can drive the transformation of food systems particularly by addressing the so-called "attitude–behavior gap", which reflects the discrepancy between positive attitudes toward a given behavior and actual consumer actions [71]. Panel data analyses from household studies have shown that even when individuals hold pro-environmental and health-oriented values, the purchase of organic products remains limited. This is largely due to the low perceived sensory value of these products, higher prices, and limited availability [71,72]. Strategies to reduce this gap include:

- enhancing consumer engagement,
- promoting food education,
- building trust in certification systems,
- strengthening the sensory image of sustainable products [31,71].

Moreover, considering moderating factors—such as the level of consumer involvement, trust, or word-of-mouth marketing—may further enhance both loyalty and actual purchasing behavior [71]. Providing societies with healthy and sustainable food is a priority addressed by the United Nations within the framework of sustainable development [73]. In 2019, the EAT-Lancet Commission on Food, Planet, Health introduced the concept of a "healthy reference diet"—a dietary model that is both beneficial for human health and sustainable for the planet. This model aims to address the pressing challenges of the global food system [74]. Transforming the food system requires multilevel interventions, involving various stakeholders—from individuals and food producers to policymakers. Food systems are significantly responsible for environmental degradation, primarily due to

the agricultural production stage [75], as well as the wasting of large amounts of biomass in the form of production residues, which are often inefficiently utilized or even squandered instead of, for example, being converted into energy in biogas plants [76,77]. Therefore, an inseparable element of this transformation is also supporting changes in consumer behavior toward more sustainable dietary patterns [78]. A key component in this process is understanding individual consumer behavior, in order to shape and influence food choices toward those originating from sustainable production systems [79,80]. Studies on consumer dietary behaviors provide insight into the key drivers behind food choices and form the basis for designing strategies that support necessary behavioral shifts. Notably, research by Sanchez-Sabaté et al. (2019) revealed that meat consumers are generally unwilling to change their eating habits for environmental reasons [81]. Meat-based diets are the norm in many Western societies, such as the United States and the United Kingdom, where vegetarians represent less than 5% of the population [82]. Common justifications for meat consumption include the following: Meat is natural—our biology has evolved to crave it. Meat is normal—it is a social and cultural practice expected in civilized societies. Meat is necessary—it is believed to be essential for human health. Meat is tasty—animal protein is perceived as flavorful and enjoyable [83]. Other significant factors influencing meat consumption are dietary habits and culinary traditions. As a result, shifting away from meat-heavy diets proves to be particularly challenging. In the face of a growing global population and increasing demand for food, the need to intensify agricultural production has become one of the key challenges of modern agriculture. It is estimated that, in order to meet global food needs by 2050, agricultural production must increase by 25–70% [84]. According to the Food and Agriculture Organization of the United Nations (FAO), the global population is expected to reach 9.7 billion by 2050, placing unprecedented pressure on food systems. Such a significant increase in yields requires not only the optimization of cultivation techniques but also the efficient use of natural resources and a reduction in agriculture's environmental impact. Currently, around 33% of the world's soils are degraded, and agriculture accounts for approximately 70% of global freshwater consumption and nearly 25% of total greenhouse gas emissions, when the entire food production chain is taken into account [85].

2. Materials and Methods

The study employed a quantitative research design and was conducted as part of the nationwide consumer survey implemented under the AgriFood 2024 initiative. The primary objective was to identify the cognitive factors influencing poultry purchase decisions in the context of sustainable food choices. Data were collected using a structured questionnaire consisting of closed-ended questions assessing consumer attitudes, motivations, and purchasing behaviors related to poultry meat. The survey was conducted online using the CAWI method (Computer-Assisted Web Interviewing) on a representative sample of adults across Poland (n = 1180 consumers)/39% of the respondents are women, 61% are men/2.73% of the respondents have completed primary education, 41.15% have completed secondary education, and 50.12% have completed higher education. The income situation of respondents can be described as follows:

- 21.46% of respondents earn up to 3000 PLN per month.
- 34.86% earn from 3000 PLN to 5000 PLN.
- 25.31% earn from 5000 PLN to 8000 PLN.
- 18.36% earn over 8000 PLN per month.

The largest group of respondents is under 25 years old, representing 32.60% of the total. The 26–35 years old group accounts for 26.10% of respondents. The 36–55 years old group makes up 28.89% of respondents. The smallest group is respondents over 56 years

old, representing only 12.50%. 60.14% of respondents live in urban areas, while 39.86% live in rural areas. The survey included only adults (18+); respondents aged 14–17 were not part of the sample. For post hoc analysis, we defined age segments as follows: 18–24 ("young adults"), 25–34, 35–54, 55+. The 18–24 segment is treated as the closest proxy to the 14–22 cohort mentioned by the reviewer, with the caveat that we lack data for those under 18. The age structure of the sample was: <25 years—32.60%; 26–35—26.10%; 36–55—28.89%; >56—12.50%. To examine the underlying structure of consumer motivations, exploratory factor analysis (EFA) was applied using the principal component method with Varimax rotation. The suitability of the data for factor analysis was assessed using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity. Analyses were conducted separately for two consumer segments frequent and occasional poultry consumers in order to capture cognitive segmentation differences. The internal consistency of the extracted constructs was evaluated using Cronbach's alpha coefficient. Factors were interpreted and named based on factor loadings and their alignment with theoretical frameworks. In the final stage, the results were translated into practical marketing communication recommendations aimed at promoting poultry as a sustainable dietary choice, with particular attention to discrepancies between declared values and actual behaviors revealed in the study. The factor analysis procedure used for the purposes of this study consisted of several stages:

2.1. Verification of the Hypothesis Regarding the Validity of Factor Analysis Application: Bartlett's Test

This test examines the hypothesis that the correlation matrix of the variables is an identity matrix, meaning that all correlation coefficients are equal to zero. In such a case, the analyzed variables are mutually independent, and each would define only one factor. As a result, there is no basis to assume the presence of any common factor, which means that factor analysis is not applicable to such data.

$$U = -\left(N - 1 - \frac{2p+5}{6}\right)\sum_{i=1}^{p} ln\lambda_i$$

p—number of variables;
N—number of observations;
λ_i—i-th eigenvalue.

The test statistic follows a Chi-square distribution with $p\ (p-1)/2$ degrees of freedom.

2.1.1. Kaiser–Meyer–Olkin (KMO) Coefficient

This is a test used to assess the adequacy of the correlation matrix. It takes values in the range <0, 1>; the higher its value, the stronger the justification for applying factor analysis. In the literature, it is often stated that the KMO value should exceed 0.5.

$$KMO = \frac{\sum_{i\neq j}\sum_{j\neq i} r_{ij}^2}{\sum_{i\neq j}\sum_{j\neq i} r_{ij}^2 + \sum_{i\neq j}\sum_{j\neq i} \hat{r}_{ij}^2}$$

r_{ij}—correlation between the i-th and j-th variable;
$\hat{r}_{ij}$ —partial correlation coefficient.

2.1.2. MSA Coefficient

In a sense, a similar assessment is the individual evaluation of each variable's suitability. Thus, the MSA allows for the elimination of individual variables prior to conducting the actual factor analysis.

$$MSA_i = \frac{\sum_{j \neq i} r_{ji}^2}{\sum_{j \neq i} r_{ji}^2 + \sum_{j \neq i} \hat{r}_{ij}^2}$$

A low MSA value indicates the need to eliminate variables from the study.

2.2. Factor Analysis

Factor analysis is based on constructing a model of a system of linear equations.

$$\begin{aligned} X_1 &= a_{11}F_1 + a_{12}F_2 + \cdots + a_{1k}F_k + b_1U_1 \\ X_2 &= a_{21}F_1 + a_{22}F_2 + \cdots + a_{2k}F_k + b_2U_2 \\ &\vdots \\ X_p &= a_{p1}F_1 + a_{p2}F_2 + \cdots + a_{pk}F_k + b_pU_p \end{aligned}$$

$$\begin{vmatrix} X_1 \\ X_2 \\ \vdots \\ X_p \end{vmatrix} = \begin{vmatrix} a_{11} & a_{12} & \cdots & a_{1p} \\ a_{21} & a_{22} & \cdots & a_{2p} \\ \vdots & \vdots & \cdots & \vdots \\ a_{p1} & a_{p2} & \cdots & a_{pp} \end{vmatrix} \cdot \begin{vmatrix} F_1 \\ F_2 \\ \vdots \\ F_p \end{vmatrix} + \begin{vmatrix} b_{11} & b_{21} & \cdots & b_{2k} \end{vmatrix} \cdot \begin{vmatrix} U_1 \\ U_2 \\ \vdots \\ U_p \end{vmatrix}$$

$$X = A \cdot F + B \cdot U$$

where:

X—the vector of observed variables,
A—the matrix of factor loadings, i.e., the matrix of coefficients of the linear combinations of the j-th factor in the i-th observed variable. These loadings indicate the relationship,
F—the vector of common factors. Common factors are unobserved (latent) variables derived from the observed variables. In practice, their number is usually smaller than the number of input variables,
U—the vector of specific (unique) factors,
B—the diagonal matrix of loadings of specific component factors.

If the common factors are uncorrelated, the factor loadings can be interpreted as the correlation coefficients between a variable and individual factors.

2.3. Selection of the Number of Factors

After conducting the above transformation, the next step involves deciding how many factors to retain for further analysis. There are several criteria for determining the appropriate number of factors. This report focuses on two methods used in the analysis: the explained variance criterion and the heuristic method—maximum likelihood method. In the case of the first criterion, the analyst adopts a predetermined threshold for the level of explained variance. This level can be interpreted as the amount of information carried by the selected factors in comparison to the original dataset. In the first step, after performing the factor analysis and calculating the factor loadings, the contribution of each factor to the variance of all variables is determined. The impact of the j-th factor FjF_j on the variance is calculated using the following formula:

$$W_j = \frac{1}{p} \sum_{i=1}^{p} a_{ij}^2 \cdot 100\% \text{ dlaj} = 1, 2, ..., \text{k}$$

W_j indicates the percentage of the total variance of all variables explained by the common factor F_j. The cumulative sum of these contributions shows what percentage of the total variability is explained by a specific number of factors. This type of analysis allows for variable reduction while accepting a relatively small predetermined loss of information. In the second approach, the validity of applying the model to the analyzed data is assessed using the chi-square test. The test statistic is expressed by the following formula:

$$U_k = N\left\{\ln|C| - \ln|R| + tr\left(RC^{-1}\right) - p\right\}$$

where

N—sample size;
$C = FF^T + U^2$—covariance matrix of the factor model;
R—covariance matrix of the observed variables.

Other notations remain as previously defined.

The degrees of freedom are calculated using the formula:

$$df_k = 1/2[(m - k)^2 - (m + k)]$$

where m is the number of observed variables and k is the number of factors. The analysis typically begins with a single factor, and in subsequent steps, one additional factor is added. This procedure is repeated until the chi-square test shows that the model does not significantly differ from the structure of the observed variables. The aim of the analysis conducted for this study was to identify new latent factors indicating the reasons for frequent or infrequent purchases of poultry meat. For this purpose, a survey was developed consisting of 21 questions and a demographic section. Each question with sub-items was disaggregated, which effectively resulted in the creation of 74 quasi-independent questions. All surveys in which respondents declared that they do not consume meat at all were excluded from the analysis. For the purposes of this study, two categories of consumers were defined:

"meat eaters"—individuals consuming poultry products more than once a week

"non-meat eaters"—individuals consuming poultry products once a week or less.

The cut-off point (>1 vs. $\leq$1 consumption occasion per week) was chosen as a pragmatic threshold for distinguishing "frequent" from "occasional" poultry consumers. This division is consistent with previous food consumption research, where one or more weekly occasions are commonly used as a marker of regular versus occasional intake. While not theory-driven in a strict sense, this operational definition ensured sufficiently balanced group sizes for factor analysis and allowed us to capture behavioral contrasts between consumers for whom poultry is an integrated part of the weekly diet and those for whom it plays a more marginal role.

Minor gaps in the selected questionnaires were filled using group medians.

3. Results

The first stage of the analysis involved examining the correlations between variables and their statistical significance. Based on this, variables were selected for which the correlation level with other variables was greater than or equal to |0.3|. The results for the variables meeting this criterion are presented in the table below and refer to the dataset containing questionnaires completed by individuals classified as "non-meat eaters." Bartlett's test value for this dataset was 1459, with 120 degrees of freedom. The associated p-value was less than 0.001. Table 1 presents the results of the inter-item correlation analysis with statistical significance for the selected variables.

Table 1. Results of the inter-item correlation analysis with statistical significance.

	Do Your Decisions to Purchase Poultry Meat Depend on Its Taste Qualities?	**Do Your Decisions to Purchase Poultry Meat Depend on Its Nutritional Value?**	**Do Your Decisions to Purchase Poultry Meat Depend On Habit?**	**Do Your Decisions to Purchase Poultry Meat Depend on Its Easy Availabilty?**	**Do Your Decisions to Purchase Poultry Meat Depend on the Price?**	**Do Your Decisions to Purchase Poultry Meat Depend on Health Reasons?**	**Do Your Decisions to Purchase Poultry Meat Depend on the Ease of Preparation?**	**Are Taste Qualities a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Nutritional Value a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Habit a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Easy Availability a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Price a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Ease of Preparation a Factor That Makes You Choose Poultry Meat over Other Types of Meat?**	**Is Easy Availability a Factor That Makes You Choose a Meat Based Meal over a Meatless One?**	**Is Price a Factor That Makes You Choose a Meat Based Meal over a Meatless One?**	**To What Extent the Change in Price Would Encourae You to Change Your Eating Habits?**
Do your decisions to purchase poultry meat depend on its **taste qualities?**	1.0000 (0.0000)	0.6094 (0.0000)	0.5297 (0.0000)	0.4047 (0.0000)	0.4090 (0.0000)	0.4706 (0.0000)	0.4618 (0.0000)	0.5599 (0.0000)	0.4940 (0.0000)	0.4432 (0.0000)	0.4064 (0.0000)	0.3951 (0.0000)	0.3724 (0.0000)	0.3115 (0.0004)	0.3543 (0.0000)	0.3536 (0.0000)
Do your decisions to purchase poultry meat depend on its **nutritional value**?	0.6094 (0.0000)	1.0000 (0.0000)	0.4007 (0.0000)	0.3408 (0.0001)	0.4539 (0.0000)	0.6810 (0.0000)	0.4799 (0.0000)	0.4776 (0.0000)	0.7113 (0.0000)	0.4091 (0.0000)	0.3895 (0.0000)	0.4291 (0.0000)	0.4036 (0.0000)	0.3505 (0.0001)	0.4903 (0.0000)	0.3933 (0.0000)
Do your decisions to purchase poultry meat depend on **habit**?	0.5297 (0.0000)	0.4007 (0.0000)	1.0000 (0.0000)	0.6474 (0.0000)	0.4542 (0.0000)	0.3510 (0.0001)	0.5604 (0.0000)	0.4742 (0.0000)	0.5060 (0.0000)	0.7128 (0.0000)	0.5361 (0.0000)	0.4706 (0.0000)	0.4935 (0.0000)	0.4288 (0.0000)	0.4218 (0.0000)	0.3045 (0.0005)
Do your decisions to purchase poultry meat depend on its **easy availabilty?**	0.4047 (0.0000)	0.3408 (0.0001)	0.6474 (0.0000)	1.0000 (0.0000)	0.6682 (0.0000)	0.3171 (0.0003)	0.6167 (0.0000)	0.4439 (0.0000)	0.4330 (0.0000)	0.6055 (0.0000)	0.7145 (0.0000)	0.6641 (0.0000)	0.5643 (0.0000)	0.4323 (0.0000)	0.4273 (0.0000)	0.4493 (0.0000)
Do your decisions to purchase poultry meat depend on the **price**?	0.4090 (0.0000)	0.4539 (0.0000)	0.4542 (0.0000)	0.6682 (0.0000)	1.0000 (0.0000)	0.4466 (0.0000)	0.5114 (0.0000)	0.4565 (0.0000)	0.4788 (0.0000)	0.4808 (0.0000)	0.4932 (0.0000)	0.8004 (0.0000)	0.4193 (0.0000)	0.4610 (0.0000)	0.6028 (0.0000)	0.5196 (0.0000)
Do your decisions to purchase poultry meat depend on **health reasons**?	0.4706 (0.0000)	0.6810 (0.0000)	0.3510 (0.0001)	0.3171 (0.0003)	0.4466 (0.0000)	1.0000 (0.0000)	0.4917 (0.0000)	0.3970 (0.0000)	0.5790 (0.0000)	0.3670 (0.0000)	0.3058 (0.0005)	0.3635 (0.0000)	0.4081 (0.0000)	0.3300 (0.0002)	0.4249 (0.0000)	0.3132 (0.0003)
Do your decisions to purchase poultry meat depend on **the ease of preparation**?	0.4618 (0.0000)	0.4799 (0.0000)	0.5604 (0.0000)	0.6167 (0.0000)	0.5114 (0.0000)	0.4917 (0.0000)	1.0000 (0.0000)	0.4804 (0.0000)	0.4645 (0.0000)	0.5335 (0.0000)	0.5100 (0.0000)	0.4994 (0.0000)	0.7498 (0.0000)	0.5059 (0.0000)	0.4839 (0.0000)	0.3916 (0.0000)
Are **taste qualities** a factor that makes you choose poultry meat over other types of meat?	0.5599 (0.0000)	0.4776 (0.0000)	0.4742 (0.0000)	0.4439 (0.0000)	0.4565 (0.0000)	0.3970 (0.0000)	0.4804 (0.0000)	1.0000 (0.0000)	0.6456 (0.0000)	0.6215 (0.0000)	0.5767 (0.0000)	0.5578 (0.0000)	0.6174 (0.0000)	0.3637 (0.0000)	0.3620 (0.0000)	0.3311 (0.0001)
Is **nutritional value** a factor that makes you choose poultry meat over other types of meat?	0.4940 (0.0000)	0.7113 (0.0000)	0.5060 (0.0000)	0.4330 (0.0000)	0.4788 (0.0000)	0.5790 (0.0000)	0.4645 (0.0000)	0.6456 (0.0000)	1.0000 (0.0000)	0.5934 (0.0000)	0.5690 (0.0000)	0.6320 (0.0000)	0.5648 (0.0000)	0.3648 (0.0000)	0.5170 (0.0000)	0.4217 (0.0000)
Is **habit** a factor that makes you choose poultry meat over other types of meat?	0.4432 (0.0000)	0.4091 (0.0000)	0.7128 (0.0000)	0.6055 (0.0000)	0.4808 (0.0000)	0.3670 (0.0000)	0.5335 (0.0000)	0.6215 (0.0000)	0.5934 (0.0000)	1.0000 (0.0000)	0.7355 (0.0000)	0.6163 (0.0000)	0.6588 (0.0000)	0.4362 (0.0000)	0.3848 (0.0000)	0.4026 (0.0000)
Is **easy availability** a factor that makes you choose poultry meat over other types of meat?	0.4064 (0.0000)	0.3895 (0.0000)	0.53610 (0.0000)	0.7145 (0.0000)	0.4932 (0.0000)	0.3058 (0.0005)	0.5100 (0.0000)	0.5767 (0.0000)	0.5690 (0.0000)	0.7355 (0.0000)	1.0000 (0.0000)	0.6521 (0.0000)	0.6097 (0.0000)	0.4317 (0.0000)	0.4285 (0.0000)	0.4577 (0.0000)
Is **price** a factor that makes you choose poultry meat over other types of meat?	0.3951 (0.0000)	0.4291 (0.0000)	0.4706 (0.0000)	0.6641 (0.0000)	0.8004 (0.0000)	0.3635 (0.0000)	0.4994 (0.0000)	0.5578 (0.0000)	0.6320 (0.0000)	0.6163 (0.0000)	0.6521 (0.0000)	1.0000 (0.0000)	0.5703 (0.0000)	0.4609 (0.0000)	0.5501 (0.0000)	0.6049 (0.0000)
Is **ease of preparation** a factor that makes you choose poultry meat over other types of meat?	0.3724 (0.0000)	0.4036 (0.0000)	0.4935 (0.0000)	0.5643 (0.0000)	0.4193 (0.0000)	0.4081 (0.0000)	0.7498 (0.0000)	0.6174 (0.0000)	0.5648 (0.0000)	0.6588 (0.0000)	0.6097 (0.0000)	0.5703 (0.0000)	1.0000 (0.0000)	0.4666 (0.0000)	0.3545 (0.0000)	0.3968 (0.0000)

Table 1. *Cont.*

	Do Your Decisions to Purchase Poultry Meat Depend on Its Taste Qualities?	Do Your Decisions to Purchase Poultry Meat Depend on Its Nutritional Value?	Do Your Decisions to Purchase Poultry Meat Depend On Habit?	Do Your Decisions to Purchase Poultry Meat Depend on Its Easy Availabilty?	Do Your Decisions to Purchase Poultry Meat Depend on the Price?	Do Your Decisions to Purchase Poultry Meat Depend on Health Reasons?	Do Your Decisions to Purchase Poultry Meat Depend on the Ease of Preparation?	Are Taste Qualities a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Nutritional Value a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Habit a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Easy Availability a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Price a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Ease of Preparation a Factor That Makes You Choose Poultry Meat over Other Types of Meat?	Is Easy Availability a Factor That Makes You Choose a Meat Based Meal over a Meatless One?	Is Price a Factor That Makes You Choose a Meat Based Meal over a Meatless One?	To What Extent the Change in Price Would Encourae You to Change Your Eating Habits?
Is **easy availability** a factor that makes you choose a meat based meal over a meatless one?	0.3115 (0.0004)	0.3505 (0.0001)	0.4288 (0.0000)	0.4323 (0.0000)	0.4610 (0.0000)	0.3300 (0.0002)	0.5059 (0.0000)	0.3637 (0.0000)	0.3648 (0.0000)	0.4362 (0.0000)	0.4317 (0.0000)	0.4609 (0.0000)	0.4666 (0.0000)	1.0000 (0.0000)	0.6633 (0.0000)	0.3741 (0.0000)
Is **price** a factor that makes you choose a meat based meal over a meatless one?	0.3543 (0.0000)	0.4903 (0.0000)	0.4218 (0.0000)	0.4273 (0.0000)	0.6028 (0.0000)	0.4249 (0.0000)	0.4839 (0.0000)	0.3620 (0.0000)	0.5170 (0.0000)	0.3848 (0.0000)	0.4285 (0.0000)	0.5501 (0.0000)	0.3545 (0.0000)	0.6633 (0.0000)	1.0000 (0.0000)	0.4142 (0.0000)
To what extent the **change in price** would encourae you to change your eating habits?	0.3536 (0.0000)	0.3933 (0.0000)	0.3045 (0.0005)	0.4493 (0.0000)	0.5196 (0.0000)	0.3132 (0.0003)	0.3916 (0.0000)	0.3311 (0.0001)	0.4217 (0.0000)	0.4026 (0.0000)	0.4577 (0.0000)	0.6049 (0.0000)	0.3968 (0.0000)	0.3741 (0.0000)	0.4142 (0.0000)	1.0000 (0.0000)

A similar analysis was conducted for the dataset concerning individuals classified as "meat eaters." The results of this analysis are presented in the table below. The value of Bartlett's test for this dataset was 957, with 28 degrees of freedom. The associated *p*-value was less than 0.001. Table 2 presents the results of the inter-item correlation analysis for this group, showing statistically significant relationships among the selected variables.

Table 2. Results of the inter-item correlation analysis for the dataset concerning individuals classified as "meat eaters".

	Do Taste Qualities Influence Your Decision to Purchase Poultry Meat?	Does Nutrifional Value Influence Your Decision to Purchase Poultry Meat?	Do Health Considerations Influence Your Decision to Purchase Poultry Meat?	Does the Easy of Preparation Influence Your Decision to Purchase Poultry Meat?	Does the Nutritional Value Encourage You to Choose Poultry Meat over Other Types of Meat?	Does the Easy of Preparation Encourage You to Choose Poultry Meat over Other Types of Meat?	Does the Nutrictional Value Encourage You to Choose a Meat Based Meal over a Meatless One?	Do Health Considerations Encourage You to Choose a Meat-based Meal Over a Meatless One?
Do taste qualities influence your decision to purchase poultry meat?	1.0000 (0.0000)	0.5323 (0.0000)	0.3605 (0.0000)	0.3937 (0.0000)	0.4059 (0.0000)	0.3984 (0.0000)	0.3571 (0.0000)	0.3168 (0.0000)
Does nutrifional value influence your decision to purchase poultry meat?	0.5323 (0.0000)	1.0000 (0.0000)	0.6233 (0.0000)	0.3349 (0.0000)	0.6957 (0.0000)	0.3388 (0.0000)	0.4517 (0.0000)	0.4427 (0.0000)
Do health considerations influence your decision to purchase poultry meat?	0.3605 (0.0000)	0.6233 (0.0000)	1.0000 (0.0000)	0.3782 (0.0000)	0.6316 (0.0000)	0.3635 (0.0000)	0.3588 (0.0000)	0.4335 (0.0000)
Does the easy of preparation influence your decision to purchase poultry meat?	0.3937 (0.0000)	0.3349 (0.0000)	0.3782 (0.0000)	1.0000 (0.0000)	0.7245 (0.0000)	0.3410 (0.0000)	0.3410 (0.0000)	0.3275 (0.0000)
Does the nutritional value encourage you to choose poultry meat over other types of meat?	0.4059 (0.0000)	0.6957 (0.0000)	0.6316 (0.0000)	0.3552 (0.0000)	1.0000	0.4092 (0.0000)	0.4257 (0.0000)	0.5064 (0.0000)
Does the easy of preparation encourage you to choose poultry meat over other types of meat?	0.3984 (0.0000)	0.3388 (0.0000)	0.3635 (0.0000)	0.7245 (0.0000)	0.4092 (0.0000)	1.0000 (0.0000)	0.3058 (0.0000)	0.3772 (0.0000)
Does the nutrictional value encourage you to choose a meat based meal over a meatless one?	0.3571 (0.0000)	0.4517 (0.0000)	0.3588 (0.0000)	0.3410 (0.0000)	0.4257 (0.0000)	0.3058 (0.0000)	1.0000 (0.0000)	0.5729 (0.0000)
Do health considerations encourage you to choose a meat-based meal over a meatless one?	0.3168 (0.0000)	0.4427 (0.0000)	0.4335 (0.0000)	0.3275 (0.0000)	0.5064 (0.0000)	0.3772 (0.0000)	0.5729 (0.0000)	1.0000 (0.0000)

Next, the preliminarily selected sets of variables, as well as the individual variables themselves, were examined using the KMO and MSA tests described in the theoretical section. The results for the dataset containing questionnaires completed by individuals classified as "non-meat eaters" are as follows: KMO value: 0.8799. Table 3 presents the results of the Measure of Sampling Adequacy (MSA) for individual variables included in this dataset.

As shown in Table 3, all MSA values for the "non-meat eaters" group exceeded the recommended threshold, indicating the adequacy of the data for factor analysis. A similar evaluation was then conducted for the dataset of "meat eaters," the results of which are presented in Table 4.

Table 3. Results for the dataset containing surveys completed by individuals "not eating meat".

Variable Name	MSA
4. Do your decisions to purchase poultry meat depend on the following factors? (rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Taste qualities.	0.8850
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Nutritional value.	0.8733
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Habit.	0.8441
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Easy availability.	0.8715
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Price.	0.8444
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Health considerations.	0.9148
4. Do your decisions to purchase poultry meat depend on the following factors? (Rate each factor on a scale from 1 to 5, where 1 means the least important and 5 means the most important): Ease of preparation.	0.8847
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Taste qualities.	0.9173
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Nutritional value.	0.8674
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Habit.	0.8864
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Easy availability.	0.8838
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Price.	0.8753
4. What makes you choose poultry meat over other types of meat? (Rate from 1 to 5): Ease of preparation.	0.8638
4. What makes you choose a meat-based meal over a meatless one? (Rate from 1 to 5): Easy availability.	0.8943
4. What makes you choose a meat-based meal over a meatless one? (Rate from 1 to 5): Price.	0.8692
4. To what extent would the following factors encourage you to change your eating habits (rate on a scale from 1 to 5)? Change in prices.	0.9540

Table 4. Results for the dataset containing surveys completed by individuals "meat eaters." KMO value: 0.8225.

Variable Name	MSA
4. To what extent do the following factors influence your decision to purchase poultry meat (rate each factor on a scale from 1 to 5, where 1 means the lowest importance and 5 means the highest importance)? Taste qualities	0.8837
4. To what extent do the following factors influence your decision to purchase poultry meat (rate each factor on a scale from 1 to 5, where 1 means the lowest importance and 5 means the highest importance)? Nutritional value	0.8197
4. To what extent do the following factors influence your decision to purchase poultry meat (rate each factor on a scale from 1 to 5, where 1 means the lowest importance and 5 means the highest importance)? Health-related aspect	0.8845
4. To what extent do the following factors influence your decision to purchase poultry meat (rate each factor on a scale from 1 to 5, where 1 means the lowest importance and 5 means the highest importance)? Ease of preparation	0.7384
4. What makes you choose poultry meat over other types of meat (rate from 1 to 5)? Nutritional value	0.8511
4. What makes you choose poultry meat over other types of meat (rate from 1 to 5)? Ease of preparation	0.7404
4. What makes you choose a meat-based meal over a meatless one (rate on a scale from 1 to 5)? Nutritional value	0.8379
4. What makes you choose a meat-based meal over a meatless one (rate on a scale from 1 to 5)? Health-related aspects	0.8449

The obtained results confirmed the appropriateness of using factor analysis for the issue under investigation. Results obtained from the factor analysis. Factor analysis was carried out separately for both defined groups. The aim of this approach was to identify the underlying causes (factors) influencing decisions related to the purchase/consumption of poultry meat. Discovering these causes makes it possible to better understand the real reasons behind poultry meat purchases in both groups, which in turn enables the development of more accurate marketing strategies. The factor analysis was conducted using the maximum likelihood method. When selecting the number of factors, it was arbitrarily assumed that in both cases the level of explained variance should reach at least 0.8. The adequacy of the obtained model was verified using the chi-square test. The table presents the results (factor loadings) obtained after conducting the factor analysis on the set of questionnaires completed by individuals "not eating meat".

The interpretation of the extracted factors aligns with behavioral theory on food choice. According to the expectancy-value framework and the theory of planned behavior, individuals are guided by salient beliefs related to immediate personal benefits such as sensory gratification (taste), perceived health outcomes, and convenience of use. These utilitarian and hedonic drivers are typically stronger and more proximal determinants of behavior than abstract or distal considerations such as ethical or environmental concerns. This explains why the factors identified in our analysis clustered clearly into the "taste–health–convenience" (THC) bundle, whereas ethical motives did not form a dominant factor structure.

The number of factors included in the table has been limited to 7, which were ultimately selected for further analysis. In the table below, the variables finally considered as contributing to the description of individual factors have been highlighted in green.

The results of the factor analysis conducted for the "non-meat eaters" group are summarized in Table 5. The table presents the factor loadings for the variables included in the analysis, with seven factors ultimately selected for further interpretation.

Table 5. Results (factor loadings) from the factor analysis conducted on the dataset of surveys from individuals "not eating meat".

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
4. Are your decisions to purchase poultry meat influenced by? [Taste qualities]	0.573	0.185	0.117	0.324	-	0.146	-
4. Are your decisions to purchase poultry meat influenced by? [Nutritional value]	0.859	0.170	0.111	-	0.184	0.111	-
4. Are your decisions to purchase poultry meat influenced by? [Habit]	0.250	0.173	0.198	0.890	0.195	0.177	-
4. Are your decisions to purchase poultry meat influenced by? [Easy availability]	0.142	0.529	0.296	0.416	0.165	0.390	−0.219
4. Are your decisions to purchase poultry meat influenced by? [Price]	0.275	0.774	0.123	0.177	0.300	-	-
4. Are your decisions to purchase poultry meat influenced by? [Health considerations]	0.692	0.173	0.200	-	0.175	-	-
4. Are your decisions to purchase poultry meat influenced by? [Ease of preparation]	0.341	0.256	0.604	0.273	0.276	0.130	−0.190
4. What prompts you to choose poultry meat over other types of meat? [Taste qualities]	0.393	0.264	0.354	0.198	-	0.306	0.269
4. What prompts you to choose poultry meat over other types of meat? [Nutritional value]	0.621	0.275	0.209	0.178	0.195	0.263	0.406
4. What prompts you to choose poultry meat over other types of meat? [Habit]	0.233	0.280	0.349	0.477	0.120	0.448	0.218
4. What prompts you to choose poultry meat over other types of meat? [Easy availability]	0.185	0.325	0.252	0.223	0.177	0.842	-
4. What prompts you to choose poultry meat over other types of meat? [Price]	0.201	0.811	0.221	0.157	0.205	0.254	0.248
4. What prompts you to choose poultry meat over other types of meat? [Ease of preparation]	0.226	0.219	0.876	0.167	0.136	0.248	0.146
4. What prompts you to choose a meat meal over a meatless one? [Easy availability]	0.162	0.231	0.273	0.180	0.560	0.141	-
4. What prompts you to choose a meat meal over a meatless one? [Price]	0.286	0.294	-	0.105	0.894	-	-
4. To what extent would the following factors prompt you to change your eating habits? [Change in prices]	0.247	0.491	0.163	-	0.180	0.194	-

Table 6 presents the eigenvalues of the correlation matrix, the percentage of variance explained by each factor, and the cumulative percentage of variance explained by the factors.

Table 6. The eigenvalues of the correlation matrix, the percentage of variance explained by each factor, and the cumulative percentage of variance explained by the factors.

Eigenvalue of the Correlation Matrix	Percentage of Variance	Cumulative Variance Percentage
8.3527	0.5220	0.5220
1.3442	0.0840	0.6061
1.1545	0.0722	0.6782
0.8755	0.0547	0.7329
0.7129	0.0446	0.7775
0.6655	0.0416	0.8191
0.5717	0.0357	0.8548
0.5092	0.0318	0.8866
0.3777	0.0236	0.9102
0.3503	0.0219	0.9321
0.2617	0.0164	0.9485
0.2399	0.0150	0.9635
0.2117	0.0132	0.9767
0.1477	0.0092	0.9859
0.1182	0.0074	0.9933
0.1068	0.0067	1.0000

The calculated chi-square statistic is 35.8, with 29 degrees of freedom and a *p*-value of 0.179. This level was achieved with 7 factors. As shown in the Table 7, for 7 factors the explained variance level is 0.8548. In summary, for the group of non-meat eaters, 7 factors should be selected for the analysis. The evaluation of factor loadings was conducted with a threshold of 0.5. This means that only those variables with a factor loading equal to or greater than 0.5 were selected for further analysis (factor interpretation). The table below presents the results (factor loadings) after conducting factor analysis on the survey data from the "meat-eating" group. The number of factors in the table has been limited to 4—the final number selected for further analysis. In the table, the variables ultimately considered as contributing to the interpretation of individual factors are highlighted in green.

Table 7. Results (factor loadings) from the factor analysis conducted on the dataset of surveys from individuals "meat eaters".

	Factor 1	Factor 2	Factor 3	Factor 4
4. Are your decisions to purchase poultry meat influenced by? [Taste qualities]	0.335	0.213	0.193	0.422
4. Are your decisions to purchase poultry meat influenced by? [Nutritional value]	0.128	0.495	0.192	0.821
4. Are your decisions to purchase poultry meat influenced by? [Health considerations]	0.235	0.591	0.157	0.329
4. Are your decisions to purchase poultry meat influenced by? [Ease of preparation]	0.800	0.146	0.163	0.157
4. What prompts you to choose poultry meat over other types of meat? [Nutritional value]	0.210	0.753	0.204	0.313
4. What prompts you to choose poultry meat over other types of meat? [Ease of preparation]	0.817	0.230	0.115	0.119
4. What prompts you to choose a meat meal over a meatless one? [Nutritional value]	0.161	0.184	0.948	0.193
4. What prompts you to choose a meat meal over a meatless one? [Health considerations]	0.235	0.436	0.453	0.134

Table 8 presents, in order, the eigenvalues of the correlation matrix, the percentage of variance explained by individual factors, and the cumulative percentage of variance explained by the factors.

Table 8. Eigenvalues of the correlation matrix, percentage of variance explained by individual factors, cumulative percentage of variance explained by the factors.

	Eigenvalue of the Correlation Matrix	Percentage of Variance	Cumulative Variance Percentage
4. Are your decisions to purchase poultry meat influenced by? [Taste qualities]	4.0596	0.5074	0.5074
4. Are your decisions to purchase poultry meat influenced by? [Nutritional value]	1.1016	0.1377	0.6452
4. Are your decisions to purchase poultry meat influenced by? [Health considerations]	0.8259	0.1032	0.7484
4. Are your decisions to purchase poultry meat influenced by? [Ease of preparation]	0.6842	0.0855	0.8339
4. What prompts you to choose poultry meat over other types of meat? [Nutritional value]	0.4292	0.0537	0.8876
4. What prompts you to choose poultry meat over other types of meat? [Ease of preparation]	0.3767	0.0471	0.9347
4. What prompts you to choose a meat meal over a meatless one? [Nutritional value]	0.2727	0.0341	0.9687
4. What prompts you to choose a meat meal over a meatless one? [Health considerations]	0.2501	0.0313	1.0000

In a descriptive perspective, the THC pattern of factors remains stable across age groups. Among respondents aged 18–24, however, the "convenience/ease of preparation" component plays a relatively stronger role in facilitating poultry consumption. We consider this consistent with the thesis of "snackification" of food choices among young adults. Given that our survey included only 18+, these conclusions refer to the 18–24 segment and are not generalized to those aged 14–17.

Table 8 presents the eigenvalues of the correlation matrix together with the percentage of variance explained by each factor, while Table 9 summarizes the cumulative variance explained and the number of factors extracted for both consumer groups. For respondents who rarely eat poultry, the variability of behaviors is explained by seven factors accounting for 87.99% of variance. For frequent poultry consumers, four multi-component factors explain 82.25% of variance. These results indicate that a more complex structure of motivations characterizes occasional consumers, whereas the behaviors of frequent consumers can be adequately explained by a smaller set of core factors. In subsequent analysis, these factors were interpreted in terms of dominant drivers such as taste, health, and convenience, as well as secondary aspects like habits, vegetarian preferences, or availability. This interpretation highlights the contrast between consumers for whom poultry is only marginal in the diet and those for whom it represents an easy-to-prepare, convenient source of protein.

Table 9. Cumulative percentage of variance explanation.

	Cumulative Percentage of Variance Explanation	
Rarely eating meat	0.8799	Number of explanatory factors
		7
Frequent meat eaters	0.8225	Number of explanatory factors
		4

Table 9 summarizes the cumulative percentage of variance explained by the extracted factors for both consumer groups. For respondents who rarely eat poultry, seven factors together account for 87.99% of variance, whereas for frequent poultry consumers, four factors explain 82.25% of variance. These results suggest that the motivations of occasional consumers are distributed across a larger number of dimensions, while frequent consumers can be described by a smaller, more coherent set of factors. In the subsequent interpretation, these factors were associated with domains such as taste, health, convenience, and dietary habits, which highlight the behavioral differences between the two groups.

Slightly more than half of the behavioral variability among individuals who eat poultry less than once a week is explained by a factor composed of variables describing the importance of taste, nutritional value, and health. Consumers consider these variables collectively. The construction of the "taste, composition, and health" factor indicates that respondents consume poultry infrequently because they do not find it tasty, do not consider it healthy, and do not perceive it as positively as other types of meat.

One in twelve respondents indicates that the barrier to higher poultry consumption lies in variables related to price and purchase availability. Four variables jointly form a factor referred to as "Not for Everyone," which is interpreted through the impact of price, price relative to competing products, and availability on store shelves.

Similarly, every twelfth respondent indicated that they would purchase more poultry if it were easier to prepare meals with it. In the subjective assessment of a portion of respondents who rarely consume poultry, the relative and absolute difficulty of preparation is a barrier to more frequent purchase and consumption of poultry.

Just over 5% of the variance in the trait is explained by variables related to eating habits. The factor named "Habit" interprets this portion of variance as being associated with respondents' preference for products other than poultry due to established dietary routines.

Part of the variance in the trait of infrequent meat consumption is explained by the "vegetarian" factor. This factor is described by two variables referring to the relatively similar availability and price of meat (not only poultry) compared to meatless meals. The composition of the factor indicates that if the price ratio were to shift in favor of meat—or rather, to the disadvantage of meatless dishes—the "vegetarian" would consume more meat. 4.16% of the variance is explained by the factor "Convenience," which indicates that respondents consume other types of meat rather than poultry because it is more readily available and due to established habits. Half of the behavioral variability among consumers who eat poultry more than once a week is explained by the factor "easy to prepare." The components of this factor are preferences related to both the absolute and relative ease of preparing a meal with poultry meat.

Differences Between Respondents' Declarations and Their Actual Market

Elements of the analysis that, due to insufficient correlation with the explained variable—in this case, the frequency of poultry meat consumption—were not classified as components of factors influencing consumer behavior, still carry equally important information for the study recipient. These elements may be perceived as strongly influencing consumers' decisions by the consumers themselves, while in fact, they do not affect final consumer behavior. The correlation coefficient threshold of 0.3, which determines the impact of a given variable on consumer behavior, was not met by, among others:

- The impact of ideological factors on consumer choices, including perceptions about farming methods and long-term health impacts. More than 50% of respondents declared sensitivity to these determinants, yet they are not correlated with the frequency of poultry meat consumption.

- Sources of information from which respondents acquire knowledge about nutrition. Among the determinants in this group were trust in professional literature and trust in specialists and dietitians, which—although strongly indicated in the survey—do not show correlation with the frequency of poultry meat consumption.
- Perception of information regarding the harmfulness of poultry meat, or the sources of such information.
- At the same time, among the variables forming the factors influencing consumer decisions, there were determinants that, according to the respondents' own declarations, are not significant to them—for example, price.

The dominant THC pattern indicates that in younger cohorts (here: 18–24), communication and product formats built on the "high-protein + convenience + neutral health profile" bundle may strengthen the attractiveness of poultry. From the perspective of the "healthy snacks" trend expected to evolve by 2030–2050, this suggests strong potential for poultry formats requiring little or no preparation (RTG, RTE, sliced/portable filets, reduced-fat/low-salt options). At the same time, it is important to minimize signals of "ultra-processing" so as not to weaken the "health" component. In our data, ethical/environmental arguments remain secondary to functional benefits, which suggests that the most effective frame will be "taste–health–convenience," with a secondary, simple message about poultry's smaller environmental footprint compared to red meat.

4. Discussion

The results of the conducted study provide valuable insights into the cognitive determinants of poultry meat purchases in the context of sustainable development. The three main identified factors—taste, health, and convenience (the THC model)—confirm that poultry consumption is strongly driven by personal benefits rather than ethical or environmental motivations. The results not only confirm the existence of the gap between pro-environmental declarations and actual purchasing behavior but also point to the mechanisms underlying it. Consumers prioritize immediate, personal benefits (taste, health, convenience), which is consistent with behavioral economics theory, according to which short-term gratification dominates over distant, abstract values. In addition, cultural factors, entrenched dietary habits, and limited trust in eco-labels weaken the impact of environmental arguments. The novelty of our study lies in proposing the interpretation of the THC model as a communication framework that enables the gradual introduction of sustainability narratives—initially rooted in taste and health, and subsequently expanded to include ethical and environmental aspects. Such an approach may not only reduce the attitude–behavior gap but also provide marketers with a practical pathway for designing effective campaigns that support SDG 3 and SDG 12. These findings are consistent with previous literature indicating the existence of the so-called "attitude–behavior gap" in pro-environmental choices (cf. [65,66,71]). Although consumers declare high awareness and support for ecological values, actual purchasing decisions continue to be based on functional factors such as price, convenience, and taste. Moreover, the results align with studies showing the limited impact of environmental arguments on attitudes toward meat consumption (cf. [86,87]). In the analyzed dataset, data related to ethics and the environment were of marginal importance, confirming earlier findings by Sanchez-Sabaté et al. (2019) regarding the low readiness of meat consumers to change their habits for environmental reasons [81]. Similarly to referenced European studies [70], our sample also showed a dominance of taste and health-related determinants, suggesting the need to tailor marketing communication strategies to actual consumer motivations. In the context of communication, the presented results confirm the effectiveness of an approach focused on personal (hedonic and functional) benefits, which has also been previously suggested in

the literature as one of the key ways to bridge the "gap" between values and purchasing behavior [71,72]. Therefore, marketing recommendations for poultry meat should focus on strengthening the product's image as tasty, healthy, and easy to prepare, while subtly introducing messages about its positive environmental impact, using communication that is understandable to consumers and consistent with the way poultry meat is perceived, which may gradually enhance pro-environmental attitudes and trust in eco-labeling [88,89].

From a behavioral perspective, the prominence of taste, health and convenience over ethical concerns is consistent with previous research showing that proximal, personally relevant outcomes (sensory pleasure, perceived well-being, ease of daily routines) are stronger predictors of actual food choice than distal, abstract motives. This is in line with behavioral economics, where immediacy of gratification outweighs long-term, collective benefits, and with the theory of planned behavior, where attitudes grounded in direct personal experience exert greater influence on intentions. Hence, our results support the view that poultry's acceptance is driven by its fit with immediate consumer needs rather than abstract ethical frames.

5. Limitations

This study did not include respondents aged 14–17; therefore, we do not generalize to the entire 14–22 cohort. Insights for youth are based on the 18–24 segment (young adults) and should be interpreted qualitatively. Dedicated research with minors is needed.

6. Conclusions

This study provides important insights into the motivational structure underlying consumer decisions regarding poultry meat purchases in the context of sustainable food choices. Factor analysis revealed three key cognitive dimensions: taste, health, and convenience (the THC model). These factors proved to be the dominant determinants of poultry consumption, surpassing ethical and environmental considerations [89–96]. Beyond confirming the existence of the attitude–behavior gap, our results explain the mechanisms that sustain it. Consumers prioritize immediate and personally relevant benefits, such as taste, well-being, and convenience, over more distant and abstract values, such as sustainability. Cultural norms, entrenched dietary habits, and limited trust in eco-labels further weaken the persuasiveness of environmental arguments. The originality of this study lies in proposing the interpretation of the THC model as a communication framework. Positioning sustainability narratives within hedonic and health-related drivers that already shape consumer behavior creates a bridge between immediate needs and long-term ecological concerns. Such an approach may reduce the attitude–behavior gap more effectively than normative ecological appeals and provides practical guidance for designing campaigns that support sustainable development goals. From a theoretical perspective, this study demonstrates how behavioral mechanisms can explain the persistence of the attitude–behavior gap and introduces the THC model as both an explanatory and prescriptive tool. From a practical perspective, the findings provide marketers and policymakers with concrete recommendations: effective communication should first emphasize taste, health, and convenience and then gradually incorporate environmental messaging. Future research should build on these findings through cross-cultural comparisons and qualitative methods to capture psychological barriers such as cognitive dissonance or rationalization of meat consumption. Including younger age groups would also provide valuable insights into how sustainability awareness develops at earlier stages of life. Therefore, while sustainability remains a strategically important value, effectively engaging consumers requires communication rooted in real, everyday motivations. Anchoring marketing strategies in the THC model offers a realistic pathway to shaping more sustainable purchasing behavior.

In the context of the growing "healthy snacks" trend among young people, we recommend a communication frame for poultry emphasizing "high protein—convenience—neutral health profile," with a clear but secondary environmental message consistent with the perception of poultry and the dominant THC motivators. The findings suggest that communication should highlight concrete and relatable benefits of poultry rather than rely on general claims. Practical examples include emphasizing clear values such as "20 g of protein per serving," "ready in 60 s," or "a light and natural everyday meal." Packaging could feature simple icons (e.g., *High Protein*, *Easy Prep*, *Natural Taste*) that quickly convey these attributes. For younger consumers, convenient formats can be promoted through messages like "Protein to-go—a healthy snack always at hand." Such targeted communication makes health, taste, and convenience more tangible and engaging, while leaving space to gradually introduce sustainability narratives in a credible and accessible way.

Overall, anchoring the THC model in behavioral theory clarifies why poultry meat is positioned as a preferred choice: it satisfies immediate hedonic and utilitarian drivers, while ethical motives remain secondary in shaping everyday behavior.

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