

# An empirical investigation of green purchase behavior

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DOI: 10.29322/IJSRP.14.07.2024.p15119

Paper Received Date: 12th June 2024

Paper Acceptance Date: 13th July 2024

Paper Publication Date: 20th July 2024

**Abstract-** The emergence of environmental issues such as the depletion of natural resources, climate change, and the increased awareness of green purchase behavior have received interest from both researchers and industrialists. Although great progress has been made in this area, research on green products is relatively limited, especially in Hungary. This study, therefore aims to determine the level of environmental concern and explore consumers' perception of green products. Using quantitative techniques, a questionnaire was conducted on a sample of 512 Hungarian consumers. We focused on determining the frequency of purchasing green products, factors **preventing** respondents from green purchases, and their environmental concerns. The study found that there is much to learn to build awareness and teach the value of caring for the environment.

**Index Terms-** green products, consumer's awareness, purchase, Hungary.

## I. INTRODUCTION

**E**nvironmental concern has driven the demand for products that are environmentally friendly. This has resulted in new environmental ethics, which have raised people's awareness and completely changed their purchasing habits (Jang et al., 2011). Companies have taken action by initiating a wide range of green efforts, including green product and service design, green supply chain management, and innovative techniques (Dangelico & Pujari, 2010).

One of the major driving factors for the adoption of the CE model is the growing awareness and interest among consumers in the important role of green purchases. Attaining sustainable development would be significantly affected by people's decisions, behaviors, and habits. However, in the area of sustainable development, how to analyze individual attitudes and actions remains a difficult subject (Guo et al., 2017).

Several significant studies on the public's awareness of the environment have been conducted by scholars in different countries, however, few empirical studies focused on Hungarian consumers. Therefore, this study aims to shed light on consumers' perceptions about green products and their concern regarding the environment. More specifically, the objectives of the study are:

- Current environmental concern
- Explore awareness and perceptions of consumers towards green products.
- Discover factors influencing consumers' willingness to pay for green products.

The study comprises four sections. The second section includes a literature review while the third section explains the research design and data collection in detail. The research findings and analysis process are presented in Section 4. The final section contains the main conclusions, a discussion of the limitations of this survey, and potential for further research.

## II. LITERATURE REVIEW

The Industrial Revolution started with the general expansion and continuous acceleration of the economy in many industries, which has launched actively discussed topics on the negative implications for the environment and society such as global warming, depletion of natural resources (Tosun et al., 2023).

Green products are referred to as environmentally friendly goods that contain less harmful materials or have a minimal negative impact on the environment. These environmentally friendly products include those that are recyclable, biodegradable, have higher standards of quality, are more durable, use less energy, save money, and are composed of recyclable materials (Mat Said et al., 2003).

Gurau and Ranchhod, (2005) believe that not enough attention has been given to consumer opinions and promotional strategies that can encourage customers to buy green brands rather than just being concerned about

the environment which can motivate individuals to support green brands rather than just being concerned with the environment.

Several research conducted by many academics have shown that people's knowledge, attitudes, values, and habits have a significant impact on the environment, other studies revealed that public knowledge is more important factor influencing the environment than official government policy (Chukwuma, 1998). The world's businesses have been developing more environmentally friendly products over time, and consumer's willingness to purchase green purchases has risen as well. However, this improved willingness has not been realized to translate into reality, Several research studies have demonstrated a poor correlation between consumers' stated favorable attitudes about green product and their actual purchasing behaviors. (Joshi & Rahman, 2016).

### III. METHODOLOGY

#### 1. Data collection

Data were collected through an online questionnaire between June and August 2023 and was available to Hungarian consumer through social networks (Facebook, and LinkedIn). The questionnaire was designed taking insights from the research objectives and review of pertinent literature. The process of respondent's selection was made by stratified proportionate random sampling was done for identifying the consumers category within Hungary because the study population is heterogeneous in terms of their socio-economic status.

Participation was voluntary and anonymous, and participants were informed about the purpose of the study, having obtained informed consent. A pre-test was also performed to assess whether participants understood the questions. The sample collected contains responses from 512 participants from different region and age category as well as educational level which makes it representative. Before the pre-test, the questionnaire was translated from English into Hungarian that allows the respondent to select the language. The questionnaire consists of three sections of questions in addition to questions regarding the socio-demographic characteristics of the participants mainly (gender, age, region, education level).

#### 2. Sample description

As illustrated in Table 1, the sample of 512 participants comprised nearly equal distributions of males (52.0%, n = 266) and females (48.0%, n = 246). Age varied among participants with the most substantial proportion being between 18 - 30 years old (32.6%, n = 167), followed by those between 31 - 45 years old (27.7%, n = 142), then 46 - 60 years old (26.2%, n = 134), and the fewest being over 60 years old (13.5%, n = 69). Regarding education level, the majority had attended university or college (43.2%, n = 221), while 33.8% (n = 173) had completed secondary school, and 23.0% (n = 118) had finished primary school. In terms of living place, Budapest was the most common residence (34.2%, n = 175), with smaller percentages living in towns, split by population size, and villages.

*Table 1. Sample description*

|                        |                          | <i>Number of respondents</i> | <i>Percentage</i> |
|------------------------|--------------------------|------------------------------|-------------------|
| <i>Gender</i>          | • Male                   | 266                          | 52%               |
|                        | • Female                 | 246                          | 48%               |
| <i>Age</i>             | • 18 – 30                | 167                          | 33%               |
|                        | • 31 - 45                | 142                          | 28%               |
|                        | • 46 - 60                | 134                          | 26%               |
|                        | • Over 60                | 69                           | 13%               |
| <i>Education level</i> | • Primary School         | 119                          | 23%               |
|                        | • Secondary school       | 174                          | 34%               |
|                        | • University and college | 222                          | 43%               |

|                        |                                  |     |     |
|------------------------|----------------------------------|-----|-----|
| <i>Place of living</i> | • Village                        | 94  | 18% |
|                        | • Town (less than 40 000 people) | 132 | 26% |
|                        | • Town (more than 40 000 people) | 111 | 22% |
|                        | • Budapest                       | 175 | 34% |
|                        |                                  |     |     |

IV. RESEARCH FINDINGS

1. Environmental concern

Environmental concern is defined as "the degree to which individuals are aware of environmental issues and support actions to solve them, as well as the willingness to contribute personally to their resolution (Naalchi Kashi, 2019).

Environmental concern has a significant impact on consumer attitudes and purchase decisions which are considered as the concern of individuals with pollution and the depletion of natural resources. It has a prominent position in the most significant theoretical frameworks for anticipating green consumer behavior. For example, in the theory of planned behavior framework, CE is one of the beliefs which generates attitude.

Table 2 shows the means and standard deviations for the statements to determine the level of respondent's concern about the environment, measured on a 1 to 5 importance scale. Out of a maximum score of 5, only one statement has a mean level above 4. This implies a considerably low level of agreement and has a significant impact on the commitment of green involvement.

On average, respondents agree that humans are significantly contributing to environmental damage since the mean of responses is 4.13 which represents the highest value among the respondents followed by, they believe that my actions as an individual can have a real positive impact on the environment 3.91.

*Table 2. Mean and standard deviation of environmental concern statements*

| <i>Statement</i>  | <i>Mean</i> | <i>St. deviation</i> |
|---|-------------|----------------------|
| <i>I am an environmentally responsible person</i>   | 3.47        | 0.81                 |
| <i>I believe that my actions as an individual can have a real positive impact on the environment</i>                | 3.91        | 0.79                 |
| <i>When I have to choose between two similar products, I choose the one that is less harmful to the environment</i> | 3.58        | 0.86                 |
| <i>Humans are significantly contributing to environmental damage</i>  | 4.13        | 0.71                 |

Analyses revealed significant correlations among various environmental concerns statements (Table 3). The belief in being an "environmentally responsible person" was positively correlated with the belief that individual "actions have a positive impact on the environment" ( $r = .367, p < .001$ ) and the tendency to "choose less harmful products" ( $r = .333, p < .001$ ), and recognizing that "humans contribute to environmental damage" ( $r = .197, p < .001$ ).

The belief that individual "actions have a positive impact on the environment" was further positively associated with the tendency to "choose less harmful products" ( $r = .205, p < .001$ ) and acknowledging that "humans contribute to environmental damage" ( $r = .205, p < .001$ ).

Lastly, the inclination to "choose less harmful products" was significantly correlated with the understanding that "humans contribute to environmental damage" ( $r = .239, p < .001$ ).

These correlations suggest that individuals who recognize their personal environmental responsibility are more likely to also believe in the positive impact of their actions, prefer eco-friendlier products, and acknowledge the significant contribution of humans to environmental damage.

**Table 3. Pearson Correlations among Environmental Concerns Statements**

|   | <i>I am environmentally responsible</i> | <i>Actions have positive impact</i> | <i>Choose less harmful products</i> | <i>Humans contribute to damage</i> |
|---|---|-------------------------------------|-------------------------------------|------------------------------------|
| <i>I am environmentally responsible</i> | -                                       | .367**                              | .333**                              | .197**                             |
| <i>Actions have positive impact</i>     | .367**                                  | -                                   | .205**                              | .205**                             |
| <i>Choose less harmful products</i>     | .333**                                  | .205**                              | -                                   | .239**                             |
| <i>Humans contribute to damage</i>      | .197**                                  | .205**                              | .239**                              | -                                  |
| <i>Sig. (2-tailed)</i>                  | .000                                    | .000                                | .000                                | .000                               |
| <i>N</i>                                | 512                                     | 512                                 | 512                                 | 512                                |

### 2. Perception of Green product prices

Growing consumer interest for green products and services encourages manufacturers to create and offer green products and services, which helps to meet the demand for green consumption from customers and achieve sustainable company growth(Wang et al., 2022), however, price continues to be a major determinant of customer decision in the competitiveness between ordinary and green items(Susanty et al., 2021). Customers cannot accurately determine a product's green status because they lack sufficient knowledge and awareness regarding green items. Product prices are only way that consumers may form indirect impressions. Some consumers abandon their purchases if the price is too high. On the other hand, if it is too low, buyers will start to doubt the quality of green products in addition to it not being able to cover the cost of manufacturing. Empirical studies demonstrate that consumers are willing to pay a premium for green products, providing the additional utility they obtain from purchasing such products(Hong et al., 2018). According to a Eurobarometer survey on the environment that was conducted among 28 member states of the European Union, 75% of Europeans are willing to pay more for environmentally friendly goods(Popescu & Wu, 2007). Overall, environment aware consumers are agreeable to afford a premium green product (Sana, 2020). Table 4 summarizes the perception of green product price among Hungarian consumers:

**Table 4. Perception of Green products price**

|                          | <i>Reasonable</i> | <i>Too high</i> | <i>No difference</i> | <i>Not Important</i> |
|--------------------------|-------------------|-----------------|----------------------|----------------------|
| <i>18 - 30 years old</i> | (35) 21%          | (64) 38%        | (44) 26%             | (24) 15%             |
| <i>31 - 45 years old</i> | (30) 21%          | (65) 46%        | (25) 18%             | (22) 15%             |
| <i>46 - 60 years old</i> | (23) 17%          | (62) 46%        | (25) 19%             | (24) 18%             |
| <i>Over 60 years old</i> | (10) 14%          | (32) 47%        | (12) 17%             | (15) 22%             |
| <b>Total</b>             | <b>98</b>         | <b>223</b>      | <b>106</b>           | <b>85</b>            |
|                          | <b>19.14%</b>     | <b>43.55%</b>   | <b>20.70%</b>        | <b>16.6%</b>         |

Overall, consumers' perceptions about the current price of green products are positive. The result showed that around 40% of the respondents either perceive the prices are reasonable or no difference compared to the conventional products. Nowadays, the green products have gained more attention from consumers and considered as an alternative to the conventional ones in the market. The research findings also revealed that, despite being more expensive than conventional products, many consumers continue to purchase green products.

### 3. Attitude towards purchasing green products

In this question, a brief definition of green products was provided before the respondents were asked about their purchase frequency as it contributes to resource preservation and environmental protection. Green products, in general, include the purchase of recycled material products, environmentally selected products and services, bio-based products, energy and water-efficient products, renewable energy products, and alternatives to harmful

or toxic chemicals. Consumers may support the production of ecologically friendly items by understanding, identifying, and purchasing environmentally labeled products.

The finding shows that only 16% of the respondents revealed a full trust and have no problem buying green products in preference to others while 35% are buying them only if they are cheaper as purchasing green products usually means paying more money. Of the respondents, 19% rejected and have a negative attitude toward green products, while 30% chose "I do not pay attention to the origin of the product".

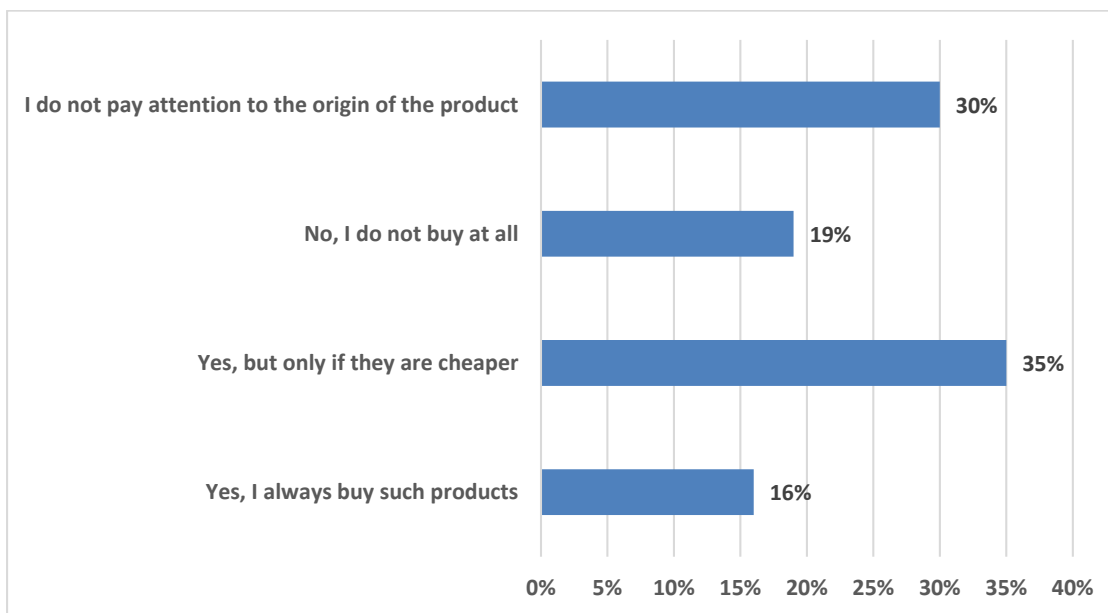


Figure 1. Green product purchase

#### 4. Factors affecting consumer’s willingness to purchase green products

Consumers’ willingness to purchase green products is influenced by several factors. Overall, all the factors assessed in this study significantly influenced green purchasing behaviors among participants.

Several studies have linked consumer behaviors and beliefs toward green products to external factors that affect their purchase intention as well as their attitude (*Sustainability | Free Full-Text | Factors Affecting the Purchase Intention of Products with Environmentally Friendly Packaging of Urban Residents in Ho Chi Minh City, Vietnam*, n.d.). However, the reality also shows that, in Hungary, environmentally friendly products still face many challenges finding a place in the hearts and mindsets of customers. In order to improve awareness and responsibility for the environmental preservation of consumers in Hungary, it is important to understand the factors affecting their intention to buy green products as a basis for administrators to have policies to urge Hungarian residents to consume environmentally friendly products.

**Lack of information on labels** can have significant impacts on consumers, the environment, and the market as a whole, without clear and accurate information on labels, consumers may find it difficult to identify and clearly differentiate eco-friendly products from those that are not. This ambiguity can lead to frustration and a lack of trust in green product claims, making it harder for consumers to make informed purchasing decisions.

**Higher prices (affordability)** can become a barrier for some consumers, limiting their ability to choose an eco-friendly product. This can create a perception that sustainability is a luxury only accessible to those with higher incomes, which may discourage broader adoption of green products.

**Distrust of the product**, when consumers are uncertain about the effectiveness or reliability of green products, which can hinder the growth of sustainable industries. Building trust through transparent and credible communication about the environmental benefits of products is crucial for fostering consumer confidence and driving the adoption of green products.

**The unavailability of green products** can have several impacts. Firstly, it limits the options available to consumers who are seeking environmentally friendly alternatives. Without access to green products, consumers may be forced to choose conventional products that have a higher environmental impact. Secondly, the lack of available green products can hinder the transition towards more sustainable consumption patterns. When consumers are unable to find or purchase green products, it becomes challenging to promote and support

sustainable practices. This can slow down the overall progress towards a greener economy and a more sustainable future.

**Poor promotion of green products** can result in limited awareness among consumers about the availability and benefits of these products. Without effective promotion, potential consumers may not even be aware that environmentally friendly alternatives exist, leading them to continue purchasing conventional products with higher environmental impacts.

**Table 5. Chi-Square Test for Influencing Factors on Green Purchases**

|   | <i>Chi-Square</i> | <i>df</i> | <i>Asymp. Sig.</i> | <i>Mean</i> | <i>Standard deviation</i> |
|---|-------------------|-----------|--------------------|-------------|---------------------------|
| <i>Lack of information on labels</i>    | 395.559           | 4         | .000               | 3.96        | 0.79                      |
| <i>Higher prices (affordability)</i>    | 393.293           | 4         | .000               | 4.04        | 0.81                      |
| <i>Distrust of the product</i>          | 297.805           | 4         | .000               | 3.39        | 0.89                      |
| <i>Green products not available</i>     | 406.906           | 4         | .000               | 4.09        | 0.80                      |
| <i>Poor promotion of green products</i> | 426.984           | 4         | .000               | 4.14        | 0.77                      |

The Chi-Square test was conducted to examine the influence of various factors on green purchases (Table 5). Each factor was evaluated to determine if the distribution of responses significantly differed from an expected distribution.

For the factor "Lack of information on labels," a significant effect was observed,  $\chi^2(4) = 395.559$ ,  $p < .001$ , suggesting that participants' green purchasing behavior is significantly influenced by the information available on product labels. Similarly, "Higher prices" showed a significant influence on green purchasing behavior with a Chi-Square value of  $\chi^2(4) = 393.293$ ,  $p < .001$ .

The factor "Distrust of the product" also significantly influenced green purchasing behaviors,  $\chi^2(4) = 297.805$ ,  $p < .001$ . Additionally, the availability of green products was a significant factor, with results indicating a significant effect,  $\chi^2(4) = 406.906$ ,  $p < .001$ . Lastly, "Poor promotion of green products" emerged as another strong influencer of green purchasing behaviors with a Chi-Square value of  $\chi^2(4) = 426.984$ ,  $p < .001$ .

Overall, all the factors assessed in this study significantly influenced green purchasing behaviors among participants.

**Table 6. Correlations among Factors Affecting Green Purchases**

|                                      | <i>Lack of information on labels</i> | <i>Higher prices</i> | <i>Distrust of the product</i> | <i>Green products not available</i> | <i>Poor promotion of green products</i> |
|--------------------------------------|--------------------------------------|----------------------|--------------------------------|-------------------------------------|---|
| <i>Lack of information on labels</i> | -                                    | .210**               | .293**                         | .151**                              | .113*                                   |
| <i>Higher prices</i>                 | .210**                               | -                    | .295**                         | .058                                | .089*                                   |
| <i>Distrust of the product</i>       | .293**                               | .295**               | -                              | .133**                              | -.021                                   |
| <i>Green products not available</i>  | .151**                               | .058                 | .133**                         | -                                   | .322**                                  |

|   |       |       |       |        |      |
|---|-------|-------|-------|--------|------|
| <i>Poor promotion of green products</i> | .113* | .089* | -.021 | .322** | -    |
| <i>Sig. (2-tailed)</i>                  | .000  | .000  | .000  | .000   | .000 |
| <i>N</i>                                | 512   | 512   | 512   | 512    | 512  |

A series of Pearson correlation analyses were conducted to examine relationships among the factors affecting green purchases (Table 6). Significant positive correlations were found between the "Lack of information on labels" and the "Higher prices" of green products,  $r(510) = .210, p < .01$ , the "Distrust of the product,"  $r(510) = .293, p < .01$ , the "Green products not easily available,"  $r(510) = .151, p < .01$ , and the "Poor promotion of green products,"  $r(510) = .113, p < .05$ .

There was also a significant positive correlation between the "Higher prices" and the "Distrust of the product,"  $r(510) = .295, p < .01$ , and a slightly less significant but still positive correlation with the "Poor promotion of green products,"  $r(510) = .089, p < .05$ . However, there were no significant correlations between the "Higher prices" and "Green products not easily available."

The "Distrust of the product" was found to have a significant positive correlation with the "Green products not easily available,"  $r(510) = .133, p < .01$ , but no significant relationship with the "Poor promotion of green products."

A noteworthy strong positive correlation was observed between the "Green products not easily available" and the "Poor promotion of green products,"  $r(510) = .322, p < .01$ .

### 5. Green products perception

Consumers perception of green products can vary based on several factors. Generally, consumers perceive green products as being more environmentally friendly, reliable, and healthier compared to conventional alternatives. They often associate green products with reduced carbon emissions, renewable resources, and less negative impact on the environment. In addition, consumers tend to view green products as a way to contribute to a more sustainable future and address current environmental issues.

On average, respondents strongly believe that purchasing and using green products can contribute to environmental conservation since the mean of responses is 3.96 which represents the highest value. They perceive these products as having a lower carbon footprint, using renewable resources, or being produced through sustainable practices. These consumers may view green products as a way to reduce their own environmental impact and make a positive difference.

The majority of respondents concurred that green products is indeed essential for a better future so that the mean is around 3.75. this reflects the positive perception of the consumers toward eco-friendly products which have a minimal impact on the planet. By choosing green products, consumers contribute to reducing pollution, conserving natural resources, and mitigating climate change. They play a crucial role in shaping the market and influencing companies to adopt sustainable practices throughout their supply chains. Therefore, consumer perception and support for green products are vital for creating a better future for our planet.

When the respondents were asked about their perception whether the green products are good for the health, the result revealed that a general consensus that green products can contribute to a healthier environment and contribute to improved health outcomes, for example, green cleaning products often use natural ingredients that avoid harmful chemicals as well as organic food products are grown without synthetic pesticides and fertilizers, potentially reducing the intake of harmful residues.

The quality and reliability of green products have gained less perception from respondents which is demonstrated by the mean on the table 5. In fact, green products are often designed with a focus on sustainability and environmental responsibility, but that does not mean they compromise on quality. furthermore, green products can be made from sustainable materials, such as recycled or renewable resources, without sacrificing durability or performance. in terms of quality, consumers often expect green products to not only be environmentally friendly but also reliable and perform as expected. The reliability is built from the transparency of information provided by the manufacturer about their manufacturing processes, sourcing of materials, and any certifications or third-party verifications they have obtained. This helps consumers make informed decisions and understand the credibility of the green claims being made.

**Table 7. Statistical test for green products perception**

|                      | <i>Green products are reliable</i> | <i>Green products are satisfying in terms of quality</i> | <i>Green products are essential for a better future</i> | <i>Green products save environment</i> | <i>Green products are good for the health</i> |
|----------------------|------------------------------------|--|---|--|---|
| <b>Chi-Square</b>    | 231.953 <sup>a</sup>               | 350.363 <sup>b</sup>                                     | 276.172 <sup>a</sup>                                    | 232.859 <sup>a</sup>                   | 238.781 <sup>a</sup>                          |
| <b>df</b>            | 3                                  | 4  | 3   | 3                                      | 3   |
| <b>Asymp. Sig.</b>   | .000                               | .000   | .000  | .000                                   | .000  |
| <b>Mean</b>          | 3.61                               | 3.63   | 3.75  | 3.96                                   | 3.64  |
| <b>St. Deviation</b> | 0.77                               | 0.82   | 0.72  | 0.75                                   | 0.75  |

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 128.0.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 102.4.

The results of the study offer compelling insights into participants' perceptions of green products across multiple measures. Each measure depicted a considerable departure of the observed counts from what would be expected if responses were uniformly distributed.

For the first measure on green product perception, a significant number of participants leaned towards agreement, with 245 out of 512 participants "agreeing" and 52 "strongly agreeing", significantly surpassing the expected count of 128 for each category. Conversely, only 39 participants disagreed, which is notably less than the expected count of 128, while 176 remained neutral, slightly exceeding the expected count.

The second measure reflected a similar trend. The majority of participants were positive about green products, with 214 "agreeing" and 72 "strongly agreeing", exceeding the expected count of 102.4 for each group. Conversely, a mere 1 participant "strongly disagreed" and 35 "disagreed", both significantly below the expected count. Notably, 190 participants remained neutral, surpassing the expected count.

The subsequent measures echoed these findings. In the third measure, 262 participants "agreed" and 69 "strongly agreed", significantly outweighing the expected count of 128. Contrastingly, only 16 participants disagreed, far fewer than the expected 128. In the fourth measure, the agreement bias was again evident with 253 "agreeing" and 124 "strongly agreeing", whereas only 9 participants disagreed. The fifth measure maintained this pattern, with 237 participants in agreement, 59 strongly so, and only 27 in disagreement.

The chi-square tests conducted for each measure uniformly indicated a significant deviation from the expected distribution. The statistics for all measures were as follows:  $\chi^2(3) = 231.953, p < .001$ ;  $\chi^2(4) = 350.363, p < .001$ ;  $\chi^2(3) = 276.172, p < .001$ ;  $\chi^2(3) = 232.859, p < .001$ ; and  $\chi^2(3) = 238.781, p < .001$ .

In summary, across all measures, participants consistently exhibited a positive perception of green products. The significant deviations from the expected distribution in the observed counts underscore the prominence of this positive bias among participants, suggesting a broader inclination towards favoring environmentally friendly products.

## 6. Influence factors for purchase decision

Consumers continuously make decisions with regards to the choice of products and services purchase (*Bettmanjohnsonpayne91-Libre.Pdf*, n.d.). These decisions are not important only for consumers themselves, but also for the company's orientation. consumers are constantly faced with a large number of alternatives that are changing pursuant to technology development and competitor pressure. In addition, the variety of choices for consumers has generated some relevant questions. Such questions, as to what extent the impact on the environment influences the consumer choice process and what are the main factors influencing their purchase behavior. In order to respond to the following questions, the respondents were asked to attribute the importance level to 5 factors while making a purchase decision. where: (1) = very unimportant, (2) = unimportant, (3) = neutral, (4) = important, and (5) = very important. To keep the scope manageable, we have chosen the most relevant factors:

**The price of a product** is always a crucial factor for consumers. They assess whether the product offers value for money and fits within their budget and the trade-off between quality/price.

**The quality** directly influences consumers decisions and perceptions whereas meets their needs and expectations in terms of performance.



**Impact on the Environment** can have a significant effect on how consumers make decisions in several of ways. Customers are more likely to choose businesses that show their commitment to environmental sustainability. Customers may decide to buy products from companies that have adopted environmentally friendly methods, like employing recycling initiatives, lowering packaging waste, or utilizing renewable energy sources. On the other hand, businesses with a bad reputation for the environment can experience a drop in sales and public reaction.

**Brand reputation**, customers tend to put trust in well-known companies that have a solid track record of providing dependable goods and services. Purchase decisions might be influenced by a good past experiences and brand loyalty.

**Convenience**, when selecting a product, consumers prioritize convenience and take into consideration factors includes product availability, simplicity of purchasing, delivery alternatives, and after-sales service.

*Table 8. Statistical test of influence factors for purchase decision*

|                                       | <i>Chi-Square</i> | <i>df</i> | <i>Asymp. Sig.</i> | <i>Mean</i> | <i>Standard deviation</i> |
|---------------------------------------|-------------------|-----------|--------------------|-------------|---------------------------|
| <i>Lower Price</i>                    | 341.086           | 4         | .000               | 3.97        | 0.81                      |
| <i>High Quality</i>                   | 207.906           | 3         | .000               | 4.18        | 0.81                      |
| <i>Less impact on the Environment</i> | 342.473           | 4         | .000               | 3.38        | 0.83                      |
| <i>Recognized brand name</i>          | 185.793           | 4         | .000               | 3.76        | 1.01                      |
| <i>Convenience</i>                    | 313.672           | 3         | .000               | 4.28        | 0.68                      |

The mean of influence factors for purchase was somewhat low on a scale of 5. Comparing the five different factors, 'Convenience' was the highest priority for the respondents with a mean of 4.28. The means for 'High quality' and 'Lower price' were slightly lower at 4.18 and 3.97 respectively. The 'Less impact on the Environment' factor was the least frequently prioritized with a mean of 3.38. Referring to Table 7, the findings serve to demonstrate that the environmental factor was rather unpopular and neglected among the respondents.

A Chi-Square test was conducted to determine the influence of various factors on green purchases (Table 1). Each of the factors was evaluated for its significance in influencing consumers' green purchasing decisions. The factor "Lower Price" demonstrated a significant influence on green purchasing behaviors with a Chi-Square value of  $\chi^2(4) = 341.086$ ,  $p < .001$ . This indicates that the distribution of responses for this factor significantly differs from what would be expected under a random distribution.

Similarly, the factor "High Quality" also showed a significant influence on green purchasing behaviors with a value of  $\chi^2(3) = 207.906$ ,  $p < .001$ . The factor "Less impact on the Environment" was also significant,  $\chi^2(4) = 342.473$ ,  $p < .001$ , suggesting that environmental considerations play a crucial role in green purchasing decisions.

Furthermore, the influence of a "Recognized brand name" was also significant with  $\chi^2(4) = 185.793$ ,  $p < .001$ . This suggests that the brand recognition of green products significantly affects purchasing decisions. Lastly, the factor "Convenience" emerged as another strong influencer of green purchasing behaviors with a significant Chi-Square value of  $\chi^2(3) = 313.672$ ,  $p < .001$ .

In summary, all the factors assessed in this study significantly influenced green purchasing behaviors among participants, suggesting that price, quality, environmental impact, brand recognition, and convenience are all critical considerations for consumers when making green purchases.

**Table 9. Pearson Correlations among influence factors for purchase decision**

|                                       | <i>Lower Price</i> | <i>High Quality</i> | <i>Less impact on the Environment</i> | <i>Recognized brand name</i> | <i>Convenience</i> |
|---------------------------------------|--------------------|---------------------|---------------------------------------|------------------------------|--------------------|
| <i>Lower Price</i>                    | -                  | -.299**             | -.258**                               | -.157**                      | -.103*             |
| <i>High Quality</i>                   | -.299**            | -                   | .250**                                | -.013                        | .090*              |
| <i>Less impact on the Environment</i> | -.258**            | .250**              | -                                     | .115**                       | -.043              |
| <i>Recognized brand name</i>          | -.157**            | -.013               | .115**                                | -                            | -.019              |
| <i>Convenience</i>                    | -.103*             | .090*               | -.043                                 | -.019                        | -                  |
| <i>Sig. (2-tailed)</i>                | .000               | .000                | .000                                  | .000                         | .000               |
| <i>N</i>                              | 512                | 512                 | 512                                   | 512                          | 512                |

**Lower Price and Other Factors:**

A significant negative correlation was found between the importance of a "Lower Price" and the importance of "High Quality",  $r(510) = -.299, p < .01$ , suggesting that as the importance of low prices increases, the emphasis on high quality decreases and vice versa. A similar negative relationship was observed with the "Less impact on the Environment",  $r(510) = -.258, p < .01$ , and the "Recognized brand name",  $r(510) = -.157, p < .01$ . Moreover, the importance of "Lower Price" was also negatively correlated with "Convenience", though slightly less pronounced,  $r(510) = -.103, p < .05$ .

**High Quality and Other Factors:**

The importance placed on "High Quality" was positively associated with the "Less impact on the Environment",  $r(510) = .250, p < .01$ . This indicates that individuals who prioritize quality also tend to consider environmental impacts when buying items. "High Quality" was also slightly positively correlated with "Convenience",  $r(510) = .090, p < .05$ .

**Less Impact on the Environment and Other Factors:**

A positive correlation was found with the "Recognized brand name",  $r(510) = .115, p < .01$ , suggesting that those who value the environment also tend to value established brand names.

**Recognized Brand Name and Convenience:**

The correlation between "Recognized brand name" and "Convenience" was not significant, indicating that these two factors are not necessarily related in consumers' purchasing considerations. Overall, the findings demonstrate a complex interplay of factors that consumers weigh when making purchasing decisions. Emphasizing low prices may come at the expense of perceived quality and environmental considerations. Conversely, a focus on high quality seems to accompany an appreciation for both environmental stewardship and convenience.

**V. CONCLUSION**

In conclusion, this study has provided insight into the trend of green products and Hungarian consumer behavior. In Hungary, while the behavior is identified to be still low, price and product convenience did seem to be the primary concern for them to make a purchase and were picked as the most important factor in influencing consumers purchase decisions. Mutual efforts are required to boost awareness of the production and consumption of eco-friendly products and services. The analysis addressed the impact of purchasing intentions on awareness of green brand challenges. The potential impacts of participants' age, gender, and educational level on their acceptance and consumption of green products were not included in this study. Future research could include into the relationship between green brand consumption and factors including age, gender, education level, and place of living.

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