

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Management**



**Bachelor Thesis**

**Sustainable, Conscious Consumer Behavior: A  
Comparative Study on Türkiye and Czech Republic**

**Bashak Sarah Yoney**

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# **BACHELOR THESIS ASSIGNMENT**

Bashak Sarah Yoney

Economics and Management

Thesis title

**Sustainable, Conscious Consumer Behavior: A Comparative Study on Türkiye and the Czech Republic**

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## **Objectives of thesis**

The objective of the thesis is to formulate, based on the research findings, a conceptual proposal for improvements in marketing programs built on a deeper understanding of consumer behaviour.

## **Methodology**

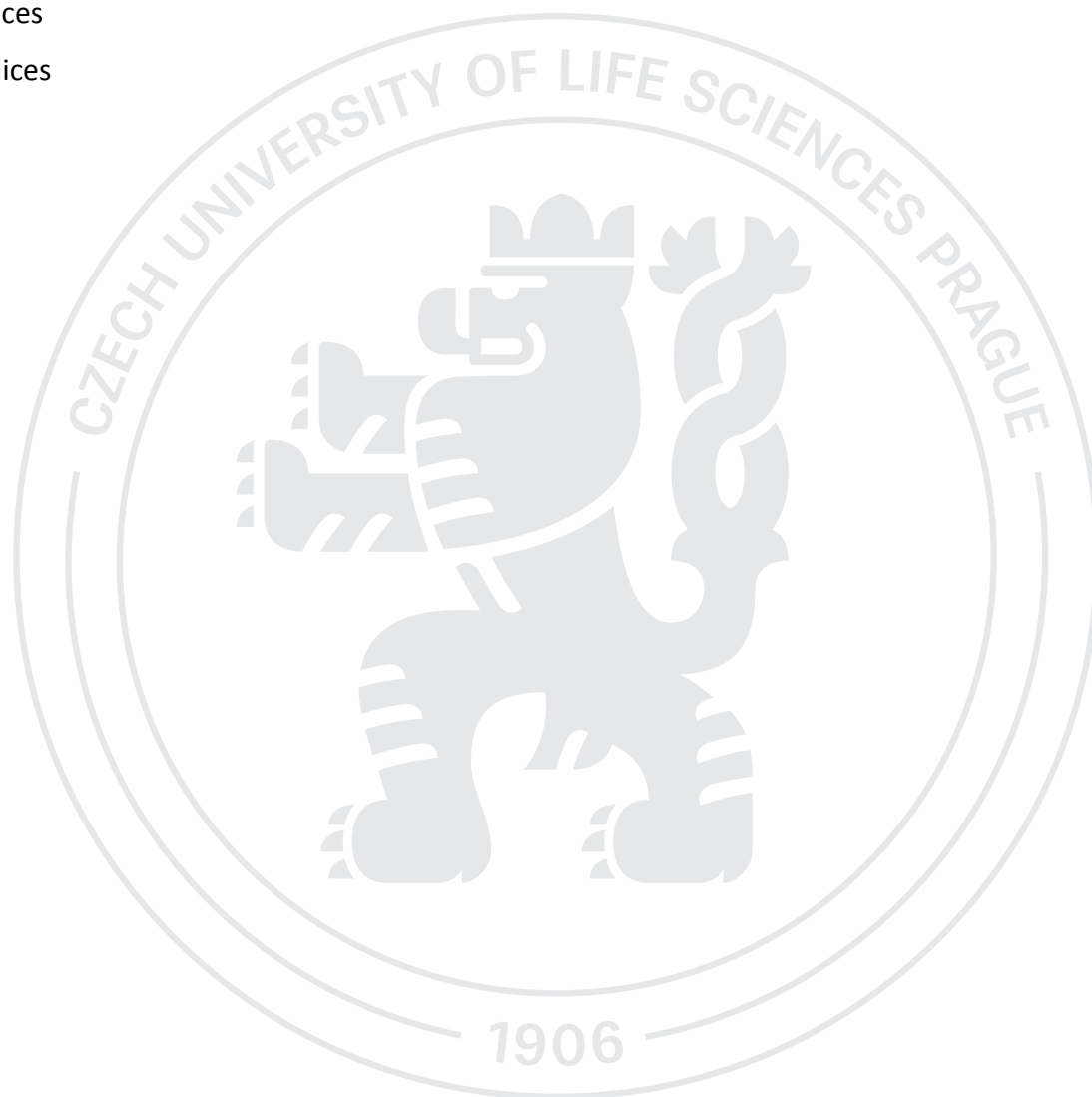
The thesis will consist of two parts. First part should deal with an elementary theoretical overview. It should deal with the theory of consumer behaviour including principles, models and its evaluation. The theoretical part of the thesis will be based on the critical review of information gained from the study and comparison of relevant resources. The fundamental, empiric part will be focused on consumer behaviour understanding in a given company. Data for the empiric part will be gained using appropriate data collection techniques – observation, interviews and questionnaires. Based on the research, the relevant conclusions of the thesis must be drawn.

Recommended structure of the diploma thesis:

1. Introduction – explanation of the topic importance.
2. Thesis objectives and methodology – the main objective of the thesis will be divided into partial objectives based on the knowledge gained from the study of the consumer behaviour theory. Appropriate methods of data collection and analysis will be explained in the methodology of the thesis.
3. Literature review – a critical review of current knowledge in the field of consumer behaviour, its models and marketing application.
4. Specification of the selected organisation – profile of the given company.
5. Practical part – analysis of data gained from own research according to the methodology.
6. Evaluation of results and recommendation – formulation of own proposal of improvements.
7. Conclusion – review of main results and evaluation of the contribution of the theses.

8. References

9. Appendices



## The proposed extent of the thesis

30-40 pages

## Keywords

Sustainability, Consume Behaviour, Turkey, Czech Republic, Consumer Buying Models, Factors

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## Recommended information sources

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SOMAN, Dilip, 2015. The last mile: creating social and economic value from behavioral insights. London: University of Toronto Press. 296 p. ISBN 9781442650435.

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## Expected date of thesis defence

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## The Bachelor Thesis Supervisor

Ing. Lenka Platilová Vorlíčková

## Supervising department

Department of Management

Electronic approval: 13. 3. 2023

**doc. Ing. Ladislav Pilař, MBA, Ph.D.**

Head of department

Electronic approval: 13. 3. 2023

**doc. Ing. Tomáš Šubrt, Ph.D.**

Dean

Prague on 13. 03. 2023

## **Declaration**

I declare that I have worked on my bachelor thesis titled "Sustainable, Conscious Consumer Behavior: A Comparative Study on Türkiye and Czech Republic" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 13/03/2023

Bashak Sarah Yoney

## **Acknowledgement**

I would like to thank my supervisor, Ing. Lenka Platilová Vorlíčková, my dad, Abdullah Öney, my mom, Nadriye Oğuz, and my boyfriend, Batuhan Kılıç for their endless support and advice during my work on this thesis.

# **Sustainable, Conscious Consumer Behavior: A Comparative Study on Türkiye and Czech Republic**

## **Abstract**

Consumer behavior has been a topic of interest for researchers due to its complexity and importance in marketing. More specifically, sustainable, and conscious consumer behaviors have gained more weight especially in recent years, with consumerist culture becoming a widespread part of our lives.

This thesis investigates sustainable and conscious consumer behaviors and their relationship with demographic characteristics; and presents results from an online, public survey, constituted to understand these cases in Czechia and Türkiye. A total of 475 responses gathered from mentioned two countries are considered for analysis. Findings show there's no statistical correlation between education level and sustainable consumer behavior. However, they indicate the strong correlation between generations and sustainable consumer behavior, conscious consumer behavior, and over consumption; countries and sustainable consumer behavior and over consumption; and income level and sustainable consumer behavior.

In a culture of over consumerism, understanding motivations of consumers and the key shifts in consumer behavior is crucial, since literature mentions the urgent need to modify consumer behavior to minimize the severe consequences awaiting.

**Keywords:** sustainable consumer behavior, conscious consumer behavior, sustainable consumer, conscious consumer, hyper consumption, over consumption, consumerism, Türkiye, Czech Republic

# Udržitelné, Vědomé Spotřebitelské Chování: Srovnávací Studie o Turecku a České Republice

## Abstrakt

Spotřebitelské chování je předmětem zájmu výzkumníků kvůli jeho složitosti a významu v marketingu. Udržitelné a uvědomělé spotřebitelské chování, zahrnuje do tohoto tématu, získalo na významu zejména v posledních letech, kdy se konzumní kultura stala rozšířenou součástí našich životů.

Tato práce zkoumá udržitelné a uvědomělé chování spotřebitelů a jejich vztah k demografickým charakteristikám; a prezentuje výsledky online veřejného průzkumu, který byl vytvořen za účelem pochopení těchto případů v Česku a Turecku. K analýze je zvažováno celkem 475 odpovědí shromážděných z uvedených dvou zemí. Zjištění ukazují, že neexistuje statistická korelace mezi úrovní vzdělání a udržitelným chováním spotřebitelů. Naznačují však silnou korelaci mezi generacemi a udržitelným spotřebitelským chováním, uvědomělým spotřebitelským chováním a nadspotřebou; země a udržitelné spotřebitelské chování a nadměrná spotřeba; a úroveň příjmů a udržitelné chování spotřebitelů.

V kultuře extrémního konzumerismu je pochopení motivací spotřebitelů a klíčových posunů ve spotřebitelském chování zásadní, protože literatura zmiňuje naléhavou potřebu upravit chování spotřebitelů, aby se minimalizovaly závažné důsledky, které čekají.

**Klíčová slova:** udržitelné spotřebitelské chování, uvědomělé spotřebitelské chování, udržitelný spotřebitel, uvědomělý spotřebitel, hyperspotřeba, nadspotřeba, konzumerismus, Turecko, Česká republika



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# 1 Introduction

With the increase in world population, the shrinking of the world with technology, the perception of consumption and consumed products and services as status indicators, and consumption becoming an inseparable part of our lives, consumer behavior has been going through changes, and consumers began to consume less consciously and less sustainably day by day. These changes yield negative outcomes, since consumption in its extreme forms wastes an undeniable amount of produced goods, human labor, and non-renewable natural resources (Young et al., 2009), and seriously affects the mental state of consumers.

Research on the topic is conducted due to the importance of the subject being supported by previous literature, and author having major concerns about hyper-consumption and its impacts on earth and society. Although there are many previous studies on the subject, it was concluded that the number of studies on the subject, especially on conscious consumer behavior and in English language, in Türkiye and in Czechia, the two countries where the research was carried out, is insufficient. Similarly, there are little to no academic resources comparing the consumption patterns and consumer behaviors of consumers from these two countries, where cultural differences might play a major role.

The primary objectives of this research are to provide a further understanding on how relationships between demographic features and sustainable consumer behavior, conscious consumer behavior, and over consumption behavior occur, and what are their features. To reach the main objectives correctly and to have general information on topic, supporting objectives are determined as explaining various concepts related to the subject, such as ‘sustainable consumer behavior’ and ‘conscious consumer behavior’, by utilizing secondary data and existing literature. Main objectives of the study are achieved by collecting primary data from 475 participants through a questionnaire, and using these responses to test 5 hypotheses, which aimed to identify whether relationships between demographic characteristics and consumer behavior exist. Based on the responses, statistical tests are conducted to test hypotheses, and the answers are examined to observe participants’ understanding of sustainable and conscious consumer behaviors.

Since various factors can significantly influence consumer behavior, and additionally, the constraints of the study might have affected the findings, the achieved results should not be generalized outside the sample group of this study. However, they offer an important insight to sustainable and conscious consumer behaviors; and believed to be of use and help for future research on the subject.

Through the research, the author aims to raise awareness on the topic, to guide the respondents and readers to question their consumption habits, and if possible, encourage them to change their consumption habits for the better.

## **2 Objectives and Methodology**

The objectives and methodology for this study were identified prior to research and by using the literature review with the aim of researching the topic clearly and efficiently.

### **2.1 Objectives**

The main objectives of this thesis are to compare the consuming habits and behaviors of Generation X, Y, and Z consumers in Czechia and Türkiye, and to evaluate to what extent consumers of these groups practice ‘sustainable consumer behavior’, and ‘conscious consumer behavior’.

Specific objectives supporting the main objectives are to define the concepts of ‘consumer behavior’, ‘sustainable consumer behavior’, and ‘conscious consumer behavior’; to determine the motivations that drive people to consumerism and overconsumption, to determine the levels of consumption consciousness and sustainable consumption based on age groups, based on the countries where the study was conducted, based on education level, and based on economic situation, and to determine the level of consumption that looks after sustainability throughout consumption activities in subjects of the study.

Main objectives and supporting objectives with an emphasis on different generations, countries, education level, economic situation and the specific subjects of the study are achieved in the practical part, while the remaining of supporting objectives are achieved in the literature review.

### **2.2 Methodology**

In order to explore the research topic, secondary data was collected with the aim of obtaining a general understanding of the topic, and primary data was collected with the aim of achieving specific objectives in need of further investigation. The data was qualitative and descriptive, the topic to explore was focused on contextual knowledge about behaviors of the subjects, and there were no experiments which included variables to be manipulated throughout the study. The research was a cross-sectional field research, meaning the data

was gathered at a single timeframe and was focused on a real-life setting, rather than a laboratory setting.

The target population of the research was people of Generation X, Generation Y, and Generation Z, living in Czechia and Türkiye; and the inclusion criteria was to be between the ages of 18 to 58, and to be living in the mentioned countries while the research was being conducted. To be used in hypothesis testing, the years marking the boundaries of each generation is determined as follows:

Gen Z: from January 1<sup>st</sup>, 1965, to December 31<sup>st</sup>, 1980

Gen Y: from January 1<sup>st</sup>, 1981, to December 31<sup>st</sup>, 1996

Gen Z: January 1<sup>st</sup>, 1997, onwards (Defining generations: Where Millennials end and Generation Z begins, Pew Research Center, 2019).

The sampling methods were chosen as voluntary response sampling (via a public online survey), and snowball sampling (via delivering the sample to a further number of participants through the primary participants) due to limitations; nonetheless, in order to minimize the risk of sampling bias, the survey created for the research was delivered to the respondents through the channels of social media, and of face-to-face interactions.

Mentioned survey was an online, public questionnaire designed to achieve the objectives of the research. It was focused on conscious and sustainable consumer behavior, and included demographic, multiple choice, and Likert scale questions. Due to ethical considerations, respondents were informed of the researcher, the goal of the research, and the fact that the subjects would remain anonymous in the beginning of the questionnaire; and the minimum age limit to participate was 18. Gathered data was analyzed through thematic analysis and was examined to identify broader themes and patterns. Mentioned survey is included as appendix.

Methodology explained above was chosen with the intention of minimizing sampling bias and optimizing analysis accuracy. Due to the lack of funding and the time to be spent on the research, limitations were present; however, they were aimed to be minimized through the chosen methods.

### 2.2.1 Formatting and Scoring of the Questionnaire

To test the hypotheses, primary data was gathered from Gen X, Gen Y, and Gen Z participants living in Türkiye and in Czechia through an online survey, included in appendix. The survey included 5 demographic questions, and 19 situation-based questions designed to measure consumers' behavior, of which, 10 were Likert scale, and 9 were multiple choice questions. Among these questions, 8 of them measured the sustainable consumer behavior, 17 measured conscious consumer behavior (which includes sustainable behavior as a criteria), and 12 measured over consumption levels, effected by external factors, of respondents. Different answers to questions were assigned a point value to them based on what the question measures. The sum of these values accumulates to create the related score.

Based on this calculation, each respondent receives a score for their sustainable consumer behavior, conscious consumer behavior, and over consumption. The means of these scores are calculated according to the demographic group the respondent belongs to, yielding an overall sustainable consumer behavior, conscious consumer behavior, and over consumption score of the specific demographic groups, such as 'respondents with a high school degree', 'respondents from Türkiye', 'respondents of Generation X'.

The rankings of the answers to each question are as follows:

Question 6:

- On conscious consumer behavior: 'Price to Quality ratio', 'Eco-friendliness or sustainable production', 'Ingredients', 'Practicality or compatibility with other items'= 5 points
- On sustainable consumer behavior: 'Eco-friendliness or sustainable production'= 5 points
- On over consumption: 'Advertisements, packaging or promotions', 'Referrals', 'Brand'= 5 points

Question 7:

- On conscious consumer behavior: 'Price to Quality ratio', 'Eco-friendliness or sustainable production', 'Ingredients', 'Practicality or compatibility with other items'= 5 points

- On sustainable consumer behavior: 'Eco-friendliness or sustainable production'= 5 points
- On over consumption: 'Advertisements, packaging or promotions', 'Referrals', 'Brand': 5 points

Question 8:

- On conscious consumer behavior: 1 to 5 points proportionally with Likert scale
- On sustainable consumer behavior: 1 to 5 points proportionally with Likert scale

Question 10:

- On conscious consumer behavior: 'I would purchase products/services with better quality or features.', 'I would purchase eco-friendly or sustainably made products more often.', 'I would purchase products/services with better quality or features.' + 'I would purchase eco-friendly or sustainably made products more often.' = 5 points; 'I would purchase more products/services' + 'I would purchase products/services with better quality or features', 'I would purchase more products/services' + 'I would purchase eco-friendly or sustainably made products more often' = 3 points
- On sustainable consumer behavior: 'I would purchase eco-friendly or sustainably made products more often.', 'I would purchase more products/services.' + 'I would purchase eco-friendly or sustainably made products more often.', 'I would purchase more products/services.' + 'I would purchase products/services with better quality or features.' + 'I would purchase eco-friendly or sustainably made products more often.' = 5 points
- On over consumption: 'I would purchase more products/services.' = 5 points

Question 11:

- On conscious consumer behavior: 'Yes'=2; 'No'= 5 points
- On over consumption: 'Yes'= 5 points

Question 12:

- On conscious consumer behavior: 0 to 5 points based on Likert scale; '1'= 5 points, '2'= 4 points, '3'= 3 points, '4'= 2 points, '5'= 0 points
- On over consumption: 1 to 5 points proportionally with Likert scale

Question 13:

- On conscious consumer behavior: 'No'= 5 points



- On over consumption: ‘Yes, I use my credit card to pay later.’, ‘Yes, I pay in installments.’, ‘Yes, I cut some of my other expenses to make that purchase.’= 5 points

Question 14:

- On conscious consumer behavior: 0 to 5 points based on Likert scale; ‘1’= 5 points, ‘2’= 4 points, ‘3’= 3 points, ‘4’= 2 points, ‘5’= 0 points
- On over consumption: 1 to 5 points proportionally with Likert scale

Question 15:

- On conscious consumer behavior: 0 to 5 points based on Likert scale; ‘1’= 5 points, ‘2’= 4 points, ‘3’= 3 points, ‘4’= 2 points, ‘5’= 0 points
- On over consumption: 1 to 5 points proportionally with Likert scale

Question 16:

- On conscious consumer behavior: ‘No’= 5 points; ‘Yes’= 2 points
- On over consumption: ‘Yes’= 5 points

Question 17:

- On conscious consumer behavior: ‘No’= 5 points; ‘Yes’= 2 points
- On over consumption: ‘Yes’= 5 points

Question 18:

- On conscious consumer behavior: ‘No’= 5 points; ‘Yes, in a good way’, ‘Yes in a bad way’= 2 points
- On over consumption: ‘Yes, in a bad way’= 5 points

Question 19:

- On conscious consumer behavior: ‘No’= 5 points; ‘Yes’= 2 points
- On over consumption: ‘Yes’= 5 points

Question 21:

- On conscious consumer behavior: 1 to 5 points proportionally with Likert scale
- On sustainable consumer behavior: 1 to 5 points proportionally with Likert scale

Question 22:

- On conscious consumer behavior: 1 to 5 points proportionally with Likert scale
- On sustainable consumer behavior: 1 to 5 points proportionally with Likert scale

Question 23:

- On conscious consumer behavior: 1 to 5 points proportionally with Likert scale
- On sustainable consumer behavior: 1 to 5 points proportionally with Likert scale

Question 24:

- On conscious consumer behavior: 1 to 5 points proportionally with Likert scale
- On sustainable consumer behavior: 1 to 5 points proportionally with Likert scale

Total conscious consumer behavior score: 85 points

Total sustainable consumer behavior score: 40 points

Total over consumption score: 60 points

### **2.2.2 Hypotheses Development**

Previous studies on the relationship between generations and sustainable consumer behavior have proved that these variables are connected, and that the level of practicing sustainable consumer behavior differs among generations (Gurau, 2012; Panzone et al., 2016; Aktaş, Çiçek, 2019). More specifically, Aktaş and Çiçek's study (2019), concluded that the level of sustainable consumer behavior of Generation X ( $\bar{x}$  =65.44 for women,  $\bar{x}$ =62.56 for men) is higher than Generation Y ( $\bar{x}$ =51.49 for women,  $\bar{x}$ =59.34 for men), and that of Generation Y is higher than Generation Z ( $\bar{x}$ =50.29 for women,  $\bar{x}$ =55.91 for men) ( $\bar{x}$  in %,  $p<0.05$ ) (Aktaş, Çiçek, 2019). Similarly, further evaluation of available literature states older consumers employ environmentally sustainable consumption and recycling significantly more than younger consumers (Diamantopoulos et al., 2003; Ramayah et al., 2010). On the contrary, there are studies claiming the opposite: younger generations are eco-friendlier and more responsible in their consumer behavior than older generations (Hines et al., 1987; Zimmer et al., 1994; Straughan, Robert, 1999). Particularly, consumers of Generation Z are proven to be considering the impact their purchases have on the environment (Budac, 2014). Furthermore, social media usage has proven to be related with green purchase intentions (Bedard, Tolmie, 2018), and given general lifestyles of different generations in today's world; Generation Z, with the highest ratio of social media usage, is expected to practice green purchase behavior, which would support Budac's findings (2014).

On the other hand, according to Rybová's research (2019), the impact age has on waste recycling was not confirmed; and on a larger scale, a different study states there is no significant relationship between sustainable consumer behavior and consumers' generation (Rybová, 2019; Bulut et al., 2017). Secondary data from İrge and Karaduman's research (2018), stating there is no significant difference between Gen X and Gen Y's tendency to

practice sustainable consumer behavior (conscious consumption variable A2 symbolizing generations=0.61,  $\alpha=0.0025$ ,  $0.61>0.0025$ ) supports these arguments. Thus,  $H_1$  was developed to test whether or not a relationship between generations and sustainable consumer behavior exists, and if so, in what ways.

*H<sub>1</sub>: There is a significant relationship between generations and their sustainable consumer behavior.*

Based on secondary data gathered from Nencková, Pecáková, and Šauer's research (2020), a large portion of consumers with university education separate textile waste, while there are fewer consumers to do so with basic education; concluding that the textile product disposal behavior of consumers is significantly dependent on education level ( $\chi^2=16.7$ ,  $df=8$ ,  $p\text{-value}=0.034$ ) (Nencková et al., 2020). Additionally, according to Hayta (2009), educated consumers are the ones who take responsibility for their consumption patterns in terms of the country's economy and sustainable consumption (Hayta, 2009). However, research indicates that even though highly educated Generation Y and Generation Z consumers were expected to be more environmentally conscious due to their easy access to information, their sustainable consumer behavior scores are low ( $\bar{x}=64$  in Gen X,  $\bar{x}=55.415$  in Gen Y,  $\bar{x}=53.1$  in Gen Z;  $\bar{x}$  in %), which the researchers express as 'surprising' (Aktaş, Çiçek, 2019). Based on these findings,  $H_2$  was developed with the aim of testing and expressing the qualities of this relationship on a larger scale.

*H<sub>2</sub>: There is a significant relationship between education level and sustainable consumer behavior.*

In 2018, the municipal waste recovery rate of Türkiye was 12% in comparison to EU-27 with 48%. Furthermore, the study also mentioned that only an estimated 6% of the generated plastic waste is recycled in Türkiye (Karasik, 2022). These findings may be explained with economic constraints and concerns, and the development level of these countries' economies: Czech Republic, along with most European countries, is a developed economy, while Türkiye is developing (Country Classification, United Nations, 2014, pp. 145-146). Furthermore, based on research, the focus on sustainable consumption and production practices varies based on economic conditions and one's level of income (Wang et al., 2019).

These findings are supported by Çelebi and Bayrakdaroğlu's study (2018) conducted in Türkiye, stating the inadequacy of recycling containers and economic constraints are more dominant than participants' environmental awareness, and that 66.5% of the Generation Y participants prefer to buy the eco-friendly option between two similar products as long as it's suitable for their budget, while complaining that these products/services are often expensive (Çelebi, Bayrakdaroğlu, 2018). Based on the secondary data from the articles, H<sub>3</sub> was developed to observe the relationship between the level of economic development and sustainable consumer behavior, both at the individual and country level.

*H<sub>3</sub>: There is a significant relationship between economic situation and sustainable consumer behavior.*

Based on secondary data, it's concluded that Gen X performs unnecessary purchasing behavior the most, and Gen Z performs it the least amongst Gen X, Gen Y, and Gen Z ( $MD_{XY}=1.95377$ ,  $p_{XY}=0.003$ ,  $MD_{XZ}=4.00911$ ,  $p_{XZ}=0.000$ ,  $MD_{YZ}=2.05534$ ,  $p_{YZ}=0.001$ ;  $p<0.05$ ); which is supported by Bulut, Çımrın and Doğan's research, stating unneeded consumption is higher in previous generations than in the next generation, in all comparisons (Aktaş, Çiçek, 2019; Bulut et al., 2017). In addition, according to research, 83.5% of participants from Generation Y states that brand is not an important criterion in their purchasing behavior (Çelebi, Bayrakdaroğlu, 2018), which can be interpreted as Generation Y being somewhat conscious in their consumer behavior, eliminating the chances of the generation being the least conscious consumers.

However, based on Milan and Mittal's research (2017), the urge to prove one's status through clothing plays a crucial motivational role on consumer behavior (Milan, Mittal, 2017). Furthermore, younger consumers are proven to prefer purchasing brand name products/services because they're concerned with how their peers view them (Fernandez, 2009). Combining these findings with Bocoock's statements from the literature review, 14 to 30-year-olds -who, as of today, are mostly Gen Z- are prone to being affected by the idea of some purchases becoming elements in defining one's status or group (Bocoock, 1993), younger generations are expected to be less conscious in their consumer behavior. H<sub>4</sub> was developed with the aim of observing the attributes of the relationship between generations and their conscious consumer behavior, based on these contradictory results of various studies.

*H<sub>4</sub>: There is a significant relationship between generations and their conscious consumer behavior.*

Based on the information on literature review, ‘emotional consumption’ emerges as one of the most important factors supporting hyper-consumption and preventing conscious consumer behavior (McClure et al., 2004; Çınar, Çubukçu, 2010; Hoyer et al., 2012), and research findings support that in some cases, consumption can serve as a function of decreasing the feeling of loneliness (Fumagalli et al., 2022). Additionally, on a general level, Kemp and Kopp’s research (2011) reveals that some people consume products of a hedonic nature with the aim of ‘down-regulating’ negative emotions and replacing them with positive ones (Kemp, Kopp, 2011). Another factor, social media and its usage, is also stated to have an effect on consumption: based on secondary data, it can be concluded that there is a positive direct effect of social media intensity and apparent consumption ( $df = 71$ ,  $\beta = 0.385^{***}$ ,  $p < 0.01$ ) (Thoumrungroje, 2014). Derived from the secondary data, the effects of external factors, such as trends, social validation, credit cards, negative feelings, and social media on over consumption in different generations and countries were aimed to be further investigated with H<sub>5.1</sub> and H<sub>5.2</sub>.

*H<sub>5.1</sub>: There is a significant difference between the intensity of overconsumption caused by external factors among generations.*

*H<sub>5.2</sub>: There is a significant difference between the intensity of overconsumption caused by external factors among Czechia and Türkiye.*

### **3 Literature Review**

Consumer behavior has been a major topic of interest for the last 75 years. With the changes in society, economics, and technology affecting the way consumers behave, literature on consumer behavior remains diverse and extensive (Peighambari et al., 2016, p.1). Due to this diversity, there are numerous ways to define consumer behavior; however, they remain on the same basis.

#### **3.1 Consumer Behavior**

In literature, consumer behavior is defined as an area which entails all consumer activities associated with the purchase, use, and disposal of goods and services, including the consumer's emotional, mental, and behavioral responses that precede, determine, or follow these activities (Kardes et al., 2014, pp. 7-8). To rephrase, consumer behavior is the behavior exhibited by individuals when they search for, purchase, use, evaluate, and dispose the products and services they purchase with the expectation of satisfying their wants or needs (Wilkie, 1994, p. 8; Schiffman et al., 2013, p. 4). It reflects the totality of consumer decisions with respect to the acquisition, consumption, and disposition of goods, services, time, and ideas by human decision-making units over time (Hoyer et al., 2012, p. 3).

The way consumers gather, process, and use information, and what motivates them can only be understood via studying consumer behavior; it's studied to improve business performance, influence public policy, and educate and help consumers make better decisions or act responsibly (Kardes et al., 2014). Thus, studying consumer behavior -and the factors related to it- has been an area social science researchers are highly interested in (MacInnis, Folkes, 2010). When defined as a field of study, consumer behavior is an applied social science, that draws on theories and concepts of psychology, sociology, economics, history, and statistics (Kardes et al., 2014, p. 13), and is interested in how consumers make (complex) decisions on consumption-related items, and how they spend their available resources on them (Schiffman et al., 2013, p. 4). Through customer focused strategies -which are implemented based on consumer behavior- marketers who understand their customers can create better products and/or services, promote more effectively, and develop marketing plans and strategies that foster sustainable competitive advantages. The goal should be to

understand the general dynamics of consumer behavior that remain constant regardless of fads or trends. Furthermore, with the study of consumer behavior, one can understand public needs and wants, and protect public from unfair, unethical, or dangerous business practices (Kardes et al., 2014, pp. 11-13).

### **3.1.1 Consumer Behavior and Marketing**

In the late 1940s, consumer behavior, as a discipline, emerged with the aim of highlighting the economic gains and advantages of market research (Ittner et al., 2009, p. 830), and firms shifted from a selling orientation to producing with accordance to actual consumer needs and wants. In literature, this shift is seen as the beginning of marketing as a concept, the idea that firms should discover and satisfy customer needs and wants in an efficient and profitable manner, while benefiting the long-term interests of the company's stakeholders (Kardes et al., 2014, p. 13). Companies that benefit from the research on this discipline (...) develop both physical and psychological marketing strategies for the behaviors of consumers (Ittner et al., 2009, p. 830).

The 'modern marketing approach' started developing with the questions of 'what', 'when', 'where', 'at what price', and 'why' being asked, and getting to know people better gaining importance in 1950s (Durmaz, et al., 2011, p. 121). This approach states that enterprises should be consumer-aimed; and in accordance with this approach, marketers are interested in consumer behavior related to the acquisition, usage, and disposition of an offering (Hoyer et al., 2012, pp. 4-5). One of the greatest examples of modern marketing approach, the application of consumer behavior principles to marketing, is the designing of persuasive marketing strategies, often involving advertisement (Schiffman et al., 2013, p. 6). In our society, media and advertisement has a huge impact on consumers (Uzoğlu, Yılmaz, 1996, p: 525), and such consumption objects cause an increase in their desire to consume more (Çınar, Çubukçu, 2010, p. 278).

### 3.1.2 Factors Influencing Consumer Behavior

Consumer behavior is a complex topic affected by many factors. Many financial decisions of consumers are, unexpectedly, largely dependent on nonfinancial influences as well as situational factors and individual features of personality (Donnelly et. al., 2012). Consumers are not categorized solely based on demographic characteristics like their age, gender, income, household size, or education. Market segmentation can also be done by taking where consumers live, their purchasing behavior, personal characteristics, attitudes, interests, ideas, activities, and organizational memberships into account (Swenson, 1992, p. 2). Different literature on the topic provides various influencer factors on consumer behavior, but according to the majority of them, consumer behavior is influenced by cultural, social, psychological, and personal factors (Kotler, 2001; Durmaz, 2008, p. 36; Rani, 2014, p. 53), while some literature mentions the additional category of situational factors (Stávková et. al., 2008; Donnelly et. al., 2012), and economical factors as well (Ramya, Ali, 2016, p. 76), which can be included in personal factors (Wilkie, 1994, p. 344; Gajjar, 2013, p. 12).

Factors such as culture, subculture -including religions, nationalities, geographic regions, and racial groups-, and social class are cultural factors (Gajjar, 2013, p. 11; Ramya, Ali, 2016, p. 78-79). Social factors include factors such as reference groups, family, and social roles and status (Mirzaei, Ruzdar, 2010, p. 3-4; Gajjar 2013, p. 11-12; Ramya, Ali, 2016, p. 78). Factors like motivation, perception, and beliefs and attitude are psychological factors (Gajjar, 2013, p. 12-13), to which, learning can be added (Ramya, Ali, 2016, p. 76). Personal factors include factors such as age and life period, lifestyle -including moral values of individuals, where they live, what they do or what they eat-, economic conditions or income, profession, personality, and health, which are important for market segmentation (Wilkie, 1994, p. 344; Gajjar, 2013, p. 12) and consumer behavior observation. Situational factors are temporary conditions which might affect consumer behavior, such as time factors, buyer's mood, or physical factors. An example to observe situational factors is research done by Tversky and Kahneman (1981). The research was concerned with the relative perception of the same discount amount relating to the initial price of a product (Maison, 2019, pp. 2-3). The respondents of the study are presented with a purchase situation of either a calculator or a jacket. The consumers in the situation of buying the calculator at the price of 15\$ are told they can purchase the same product for 10\$ from a different store 20 minutes away. In the



second situation the price of the jacket is 125\$, the respondents are told that they can purchase the same jacket at a price of 120\$ from a different store 20 minutes away, like the first situation. While 68% of the respondents who're buying the calculator chose to take the trip to the store with the cheaper option, the respondents purchasing the jacket only went to the further store with a ratio of 29%. In both cases, the product was 5\$ cheaper, however, the discount in the first case was 1/3 of the total price, and in the second case the ratio was 1/30, which influenced the respondents' perception of 5\$, relative to the total price (Tversky, Kahneman, 1981; Maison, 2019).

As mentioned previously, consumer behavior may be affected by many factors; however, the mentioned factors are the most valid and accepted ones in literature. While consumers might be influenced by all of the factors at the same time, they might be more prone to being influenced by only one or some of these factors, as well.

### **3.2 Sustainability and Consciousness in Consumption**

Sustainability has become an important topic of the modern era, especially because of environmental challenges and nature degradation (Ascensão et al., 2018; Imeson, 2012), which triggered sustainable consumerism movements (Turner, 2015; Su et al., 2019). Environmental and social problems have mostly arisen with rapid developmental activities (by humans, especially after the industrialization era) (Wang et al., 2014). These irresponsible industrial activities are seen as the main reasons of most environmental problems, such as global warming, and the economic inequality in societies (Joshi, Rahman, 2019), and were done mostly with the aim of satisfying consumer culture. Thus, consumption can be seen as one of the major key factors of unsustainable development. The urgent need to promote more sustainable consumption behaviors has been prominently reaffirmed (Fischer et al., 2017). With the importance of the topic, consumers have been becoming more conscious about the environment (in developing and developed countries) (Horne, 2009), and increasingly getting willing to be environmentally friendly and adopt environmentally conscious consumer behavior (Kautish, Sharma, 2020).

Based on the definition by United Nations World Commission on Environment and Development, sustainability is meeting the resource needs of the current generations, while

preserving them for the upcoming generations (Mensah, Casadevall, 2019). Similarly, sustainable consumption is defined as the use of goods and services that respond the basic needs and bring a better quality of life, while minimizing the use of natural resources and toxic materials, as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations (Kilbourne et al., 1997). In addition, eco-friendly (green) products are defined as goods with the least possible negative impact on the environment and resources, that are sustainably manufactured, and/or promoting sustainable life (Rana, Paul, 2017). Making the environmentally ethical choice includes purchasing the least damaging goods to the nature and society (Zaharia, Zaharia, 2015), and by purchasing sustainable products, consumers can reduce or prevent environmental degradation (Biswas, Roy, 2015).

According to Elkington's (1997) triple bottom line approach, sustainability covers three dimensions, that are focused on the planet (environment), people (society), and profit (economic) (Elkington, 1997; Balderjahn et al., 2018). Similarly, according to Gruner and Power (2017), sustainable purchasing involves procuring sustainable products, and is only achievable through the integration of three typical pillars, that possess social, economic, and environmentally friendly attributes (Gruner, Power, 2017). This integration balances the process of achieving economic viability with social fairness and minimal negative impact on environment (Khalil et al., 2021). Thus, sustainability concerns extend further beyond green consumption (Huang, Rust, 2011).

In the modern societies of our world, most consumers support the idea of environmental products and purchasing them (Zaharia, Zaharia, 2015), and many studies have displayed the importance and need to foster and examine sustainable purchase behavior (Cerri et al., 2018; Kumar et al., 2017; Nguyen et al., 2018). Supportively, customers have shown the willingness to implement sustainable consumption habits (Tanner, Wölfing Kast, 2003), and available literature indicates that the number of eco-friendly consumers is growing swiftly; nonetheless, the degree of acceptance of sustainable products among them differs (Kanchanapibul et al., 2014; Wang et al., 2014), and this consciousness does not directly reflect in their purchasing behavior (Young et al., 2009).

In corporate strategies and marketing activities focused on increasing sustainability, consumers are seen as the main stakeholders (Leonidou et al., 2013). Ensuring corporate sustainability is amongst the goals of businesses while implementing sustainability strategies (van Doorn et al., 2020).

According to Gierszewska and Seretny (2019), responsible (conscious) consumption means making purchase decisions taking social and environmental consequences that result from the extraction of raw materials and the production, distribution, use, and utilization of a given product or its packaging into account (Gierszewska, Seretny, 2019). It also means a change in the approach to shopping, and in over consumerist societies. What we buy and how we buy is directly related to the development of many societies -it can accelerate or obstruct development.

### **3.2.1 Consumerist Societies and Overconsumption as a Culture**

Consumption in its extreme form of over consumption or hyper-consumption, often understood as excessive consumption unjustified by real human needs (Gierszewska, Seretny, 2019), is becoming one of the main problems of the globalized world (Obesity - Special Report, The Economist, 2012). In post-industrial societies, it can be assumed that social advancement does not mean attaining coveted professional positions, but rather joining coveted consumer societies (Atiker, 1998, p. 38). The distinct feature of consumer society is that instead of consuming for needs, consumption becomes the goal and need itself -shopping is now even done with the hope of relieving stress (Çınar, Çubukçu, 2010).

In line with the system and the help of advertising, certain products are introduced as if they're the mandatory needs of consumers. Throughout this process of portraying products as social needs via advertising, the feelings of the viewer are addressed constantly, and consumers get a feeling of lacking something in their own life, rather than evaluating this as a deficiency of social life and society (Çınar, Çubukçu, 2010). How luxury items are advertised is a good example of this, with the ads on media having slogans such as 'You deserve this!', or 'Everyone's special!', consumers are unconsciously wired to think they deserve all those luxury cars or necklaces and feel the lack if they don't own them. All kinds of personal luxury arise primarily from a purely self-centered sense of pleasure, but luxury,

in most cases, is almost identical with ‘wasting’ goods, as well as wanting to use better ones (Çınar, Çubukçu, 2010).

In the new world, societies are able to see the living standards of other societies and the level of prosperity they’ve achieved, and this results in similar consumptions inspired by what have been seen, with an expectation to improve the consumers’ quality of life (Ferman, 1989). Especially in the last quarter of 20<sup>th</sup> century, with the feeling of the world getting smaller as a result of the developments in technology and communication, and the gradual disappearance of economic and political borders as results of globalization; the economic, political, social, and cultural interaction between nations and countries has increased rapidly (Çanakçı, 1996). In economic terms, this convergence includes the world becoming a marketplace and the homogeneous behavior of consumers (Çınar, Çubukçu, 2010, p. 228). Globalization causes the universalization of consumption patterns. (...) Especially among middle class, the model of consumption results from stylish home furniture to as far as good education of one’s children (Gierszewska, Seretny, 2019). People watch the same television program formats on all continents and buy the same products from global producers on local markets; they began to look similar and behave similarly in all corners of the World (Gierszewska, Seretny, 2019, p. 200).

### **3.2.1.1 How Over Consumption Affects Consumers**

It has been established that emotions influence various dimensions of consumer behavior (Mayer et al., 1992). Similarly, marketing and consumerist culture influence consumers’ emotions, addressing our deep passion to consume, and convincing us to keep on purchasing.

In societies around market economy, the most used area of the media is the manipulation of demand (Uzoğlu, Yılmaz, 1996, p. 525). A similar expression, the manipulation of needs, is perceived as the power to turn the things consumers don’t need into ‘needs’ (Çınar, Çubukçu, 2010, p. 282). It is argued that the ‘demand generation mechanism’ of advertising is constantly trying to create new discontents and new demands that can only be alleviated by the consumption of goods. A good example of creating new demands are the newspapers that come with ‘promotions’: consumers can claim the ‘promotion’ directly when they purchase the paper or collect a certain number of coupons before claiming. However, in

today's world, consumers may see the main 'end' newspaper as a 'tool' to obtain the promotion, and promotion as the 'means' to sell the original newspaper (Doğan, 1996, p. 400).

Marketing further affects some people in the form of brand obsession. A 'Coca Cola-Pepsi' brain study on consumer neuroscience suggests brand choice can be driven by sensory information in some contexts, but also by experienced emotions (McClure et al., 2004, p. 385), proving the existence of the emotional link some consumers experience towards a brand. Brand loyalty/obsession is more commonly observed in younger generation than in older, and this obsession leads their purchases (Wood, Lynch, 2002, p. 421). Additionally, consumers can organize communities around brands, know and experience characteristics about these brands, and respond to them (Schmitt, 2011). They also have different levels of psychological engagement with brands due to different needs, motives, and goals: these levels are object-centered engagement, self-centered engagement, and social engagement, and as moved along object-centered engagement to social engagement, brand becomes increasingly meaningful to consumer (Schmitt, 2011).

As mentioned, not only marketing, but also consumerism and consumerist culture influences societies. One of the possible effects consumerism has on consumer's psychology is related to the formation of a sense of identity, which can be perceived as a process that can be achieved through using certain consumer goods (...) (Bocock, 1993). Such consumption patterns can become key elements, used in defining who is and isn't a member (of a specific group). These situations are most common in individuals between the ages of 14 to 30, however, similar patterns may apply in older age groups (Bocock, 1993). Another example can be the shift of the perception of concepts- such as happiness or time. Purchasing and consuming a certain product/service, like one's favorite snack or the newly released smartphone, can make a consumer happy. Furthermore, when consumers make a purchase that does not work out well, they will perceive the period of time until the next purchase of theirs as being shorter and be encouraged to move on to the next purchase, since they want to remove the negative feeling they might have (Hoyer et al., 2012).

Consumers, surrounded by the strong marketing strategies, are affected by the factors that promote consumption, evolving consumption into a 'way of life'. As consumers, people are

encouraged to shape their lives using their purchasing power to make their existence meaningful, by exercising their freedom to choose in a market where individuals simultaneously and continuously buy goods and services (Çınar, Çubukçu, 2010). The prevailing way of thinking today is to have as many material possessions as possible. With stimulants such as programs in media, advertisements, developments in marketing techniques, and the number of shops, the lifestyles of consumers are affected, and consumers have indexed their lifestyles to constant consumption. Consumers, who are already under the siege of consumption objects, tend to show a greater propensity to consume with all the effects of consumption-increasing factors, such as the unconscious use of credit cards, the convenience of the shopping environment, the constant change in fashion, leisure time, packaging, ostentatiousness, special occasions, seeing consumption as a status, and the effects of mass media (Çınar, Çubukçu, 2010).

Consumerism is criticized not only for the fact that it promotes the development of materialism, but also a great waste of produced goods, human labor, and non-renewable natural resources. Another problem associated with consumerism is not taking social, ecological, and individual costs into account. It ought to be kept in mind that the low cost of a product may be the result of the manufacturer's failure to comply with basic standards, such as employing below minimum wage. The ignorance of consumers on how the environment, society, and culture gets influenced by overconsumption makes matters worse (Young et al., 2009). Depletion of natural resources will have severe consequences on the manufacturing capacity, and not only in the next few centuries, but also in the near future itself, risking the survival of future generations (Kibert et al., 2011). Compensating and reversing the damage done to the environment and the society requires radical changes in consumption and production patterns (Joshi, Rahman, 2019). The prime responsibility on the change for the worse of the environment belongs to humankind (Grunert, Juhl, 1995), which calls for modification of human behavior (Joshi, Rahman, 2015).

## 4 Representativeness of Sample Group

In order to evaluate the representativeness of the sample group of study, research was done to better understand the demographic environments of Czechia and of Türkiye.

Category	Population	Ratio to Total Population
<b>Age Group</b>		
18-25	763757	7,257%
26-42	2331551	22,154%
43-58	2523264	23,976%
<b>Education Level</b>		
Primary	1315521	12,5%
Secondary	3262492	31,0%
Post-secondary	3420354	32,5%
Tertiary	1852253	17,6%
<b>Occupation</b>		
Employee	8829776	83,9%
Employer	11577	1,1%
Own-account	1578625	15,0%

*Table 1: Demographic proportion of Czech population (data gathered from Czech Statistical Office, 2021).*

The information gathered from the official website of Czech Statistical Office is from 2021, thus, the division of age groups seen on *Table 1* was updated to reflect the age groups in the year of 2023. Based on *Table 1*, the ratio of Gen Z's population to the total population of Gen Z, Y, and X in Czechia is 13.593%, while the ratio is 41.497% for Gen Y, and 23.976% for Gen X. However, in the sample group, the ratio is 64% for Gen Z, 35% for Gen Y, and only 1% for Gen X (see *Appendix 7 and 9*). Since the distribution of sample group and Czech population differs from each other, the sample group is not representative, and the findings relating to age groups and generations should not be generalized outside sample group.

0.6% of the population in Czechia is recorded as 'no education', and 5.8% is recorded as 'not identified' (Czech Statistical Office). The remaining of the population is split between 'lower secondary or primary education', 'secondary including vocational (without graduation)', 'upper or post-secondary education', and 'tertiary education'. The ratio of primary education level to the total population, excluding 'no education' and 'not identified', is 13.355%, while the ratio is 33.12% for secondary education level, 34.722% for post-secondary education level, and 18.803% for tertiary education level. In the sample group the ratios are as follows: 0% for primary education, 2% for secondary education, 25% for high school, 3% for vocational, 49% for bachelor's, 19% for master's, and 2% for doctorate levels

(see *Appendix 11*). Based on the ratios, it can be concluded that the sample group has a higher average education level than the real population. The sample group is not very representative, and findings relating to education level should not be generalized beyond sample group.

The sample group was, again, not very representative in means of occupations (see *Table 1* and *Appendix 13*). However, since none of the hypotheses relates to occupations, the representativeness of occupation distribution across the population of Czechia is not examined further.

Category	Population	Ratio to Total Population
<b>Age Group</b>		
21-25	6596320	7,735%
26-40	19086394	22,381%
41-60	21947401	25,736%
<b>Education Level</b>		
Primary	19187899	22,5%
Secondary	21319888	25%
High School	19102620	22,4%
College	15009201	17,6%
<b>Occupation</b>		
Employee	60548483	71%
Employer	4008139	4,7%
Own-account	13474169	15,8%

*Table 2: Demographic proportion of Turkish population (data gathered from Turkish Statistical Institution, 2021&2022).*

Information on *Table 2* was gathered from Turkish Statistical Institution, and apart from the information on age group from 2022, all information is from 2021.

Since the data Turkish Statistical Office published on age is divided into groups as 15 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, and 55 to 59, observation on the representativeness of the sample group is not optimally accurate. Thus, the data was updated to represent the age groups in 2023 and summed up to represent the age groups of 21 to 25, 26 to 40, and 41 to 60 for better accuracy. The ratio of the population of 21–25-year-olds to the total population between the ages of 21 and 60 in Türkiye is 13.849%, while the ratio is 40.072% for 26–40-year-olds, and 46.079% for 41–60-year-olds. In the sample group, the ratio of Gen Z’s population to the total of Gen Z, Y, and X’s population is 45%, while its 28% for Gen Y, and 27% for Gen X (see *Appendix 8 and 10*). As mentioned, the comparison of the sample group and the population of Türkiye is not optimal due to the



difference in groups, however, the comparison concludes that the sample group is not representative of the population, and should not be accepted beyond sample group.

10% of the population in Türkiye is recorded as ‘no education’, and 2.5% is not identified (Turkish Statistical Institution). The remaining of the population is split between ‘primary education’, ‘secondary education’, ‘high school’, and ‘college degree’. The ratio of primary education level to the total population, excluding ‘no education’ and not identified, is 25.714%, while the ratio is 28.571% for secondary education level, 25.6%% for high school level, and 20.114% for college education level. In the sample group the ratio is 2% for primary education, 3% for secondary education, 15% for high school, 0% for vocational, 68% for bachelor’s, 10% for master’s, and 2% for doctorate levels (see *Appendix 12*). Parallel to Czechia, it can be concluded that the sample group has a higher average education level than the real population in Türkiye, too. Thus, the sample group is not very representative, and findings relating to education level should not be generalized beyond sample group.

Since occupation is not considered in the hypotheses, no detailed examination of the representativeness of the sample group is done (to compare frequencies, see *Table 2* and *Appendix 14*). However, if examined, it should be noted that 18.3% of the total population in Türkiye is not included in workforce due to education, and 16.6% is retired (Turkish Statistical Institution).

For both countries, information on how the population is distributed based on average monthly income levels was not available. Further charts on demographics of the sample group for both countries individually and cumulatively are included as appendix (*Appendix 1-16*).

Predominantly, it can be concluded that the sample group used throughout the study is not representative of the total populations of Czechia and Türkiye. Due to time constraints and the difficulties in reaching the target groups, the sample group could not be optimized to represent countries’ populations (see ‘Limitations of Study and Recommendations for Future Research’).

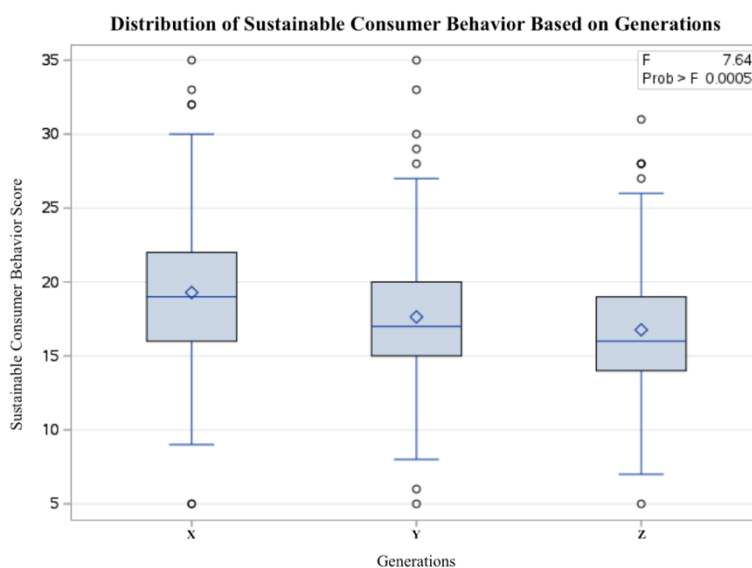
## 5 Practical Part

In order to test the hypotheses, the scores of each individual respondent were calculated on three different levels: conscious consumer behavior, sustainable consumer behavior and over consumption (see ‘Formatting and Scoring of the Questionnaire’). Appropriate statistical methods were chosen in order to test each hypothesis. Since there were more than 2 groups being compared in  $H_1$ ,  $H_2$ ,  $H_{3,2}$ ,  $H_4$ , and  $H_{5,1}$ , one-way ANOVAs were performed to test these hypotheses. For  $H_{3,1}$  and  $H_{5,2}$ , since there were only two groups both with large sample sizes of 258 and 217, normality was tested to choose the right statistical test. Based on the normality test results, it was seen that data was not normally distributed for  $H_{3,1}$  and for  $H_{5,2}$  ( $H_{3,1}$ :  $p < 0.010$  for Developing and Developed Economy;  $H_{5,2}$ :  $p = 0.037$  for Türkiye,  $p < 0.010$  for Czechia). Due to the distribution of data,  $H_{3,1}$  and  $H_{5,2}$  were tested with Wilcoxon Rank Sums test. Detailed ANOVA and Wilcoxon Rank Sums test results are included in Appendix (*Appendix 17-33*).

The null hypothesis corresponding to  $H_1$  is as follows:

$H_0$ : There is no significant relationship between generations and their sustainable consumer behavior.

The variables mentioned on the hypothesis are visualized with a boxplot of distribution of sustainable consumer behavior score across generations, and are shown on *Graph 1*.



*Graph 1: Boxplot of generations and their sustainable consumer behavior score.*

The minimum and maximum values, quartiles, means, and standard deviations of variables based on the boxplot are shown on *Table 3*.

GENERATION	X	Y	Z
Minimum	5	5	5
Minimum Whisker	9	8	7
1st Quartile	16	15	14
Median	19	17	16
3rd Quartile	22	20	19
Maximum Whisker	30	27	26
Maximum	35	35	31
Mean	19,290	17,640	16,768
Standard Deviation	5,882	4,948	4,185

*Table 3: Statistical values of categorical variables from H<sub>1</sub>.*

A one-way ANOVA was conducted to test the hypothesis: the number of observations was 475 in total, of which 263 were Gen Z, 150 were Gen Y, and the remaining 62 were Gen X.  $\bar{x}$  of sustainable consumer behavior score was calculated as 16.768 for Gen Z, 17.64 for Gen Y, and 19.29 for Gen X. Derived from these results, it can be concluded that older generations are more sustainable in their consumer behavior, in all comparisons. These findings support Aktaş and Çiçek's (2019), Diamantopoulos, Schlegelmilch, Sinkovics and Bohlen's (2003), and Ramayah, Lee, and Mohamad's (2010) statements.

Based on the one-way ANOVA test, the F value is calculated as 7.64, and the corresponding p-value is 0.0005 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0005) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected. The one-way ANOVA revealed that there is a statistically significant difference in mean sustainable consumer behavior score between different generations, and that there is a significant relationship between generation X, Y, and Z, and their sustainable consumer behavior (F (2, 472)= [7.64], p= 0.0005).

Detailed test results obtained from SAS Studio can be seen in *Appendix 17*.

The one-way ANOVA was conducted for the sample group of Türkiye and of Czechia individually to compare the results achieved from both countries.

There was a total of 217 observations from Türkiye, of which, 98 were Gen Z, 60 were Gen Y, and 59 were Gen X.  $\bar{x}$  of sustainable consumer behavior score was calculated as 16.673 for Gen Z, 19.237 for Gen Y, and 19.153 for Gen X participants from Türkiye; contradicting with the statement of older generations being more sustainable in their consumer behavior. The F value for this analysis is calculated as 5.93, and the corresponding p-value is 0.0031 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test

(0.0031) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected for Türkiye. The one-way ANOVA revealed that there is a significant relationship between generation X, Y, and Z, and their sustainable consumer behavior in Türkiye ( $F(2, 213)= [5.93]$ ,  $p= 0.0031$ ). Detailed test results obtained from SAS Studio can be seen in *Appendix 18*.

There was a total of 258 observations used in the ANOVA analysis from Czechia, of which, 165 were Gen Z, 90 were Gen Y, and only 3 were Gen X.  $\bar{x}$  of sustainable consumer behavior score was calculated as 16.842 for Gen Z, 16.767 for Gen Y, and 16.667 for Gen X participants from Czechia; not only contradicting with the statement of older generations being more sustainable in their consumer behavior, but also suggesting that younger generations of Czechia are more sustainable in their consumer behavior than older generations, in all comparisons. The F value for this analysis is calculated as 0.01, and the corresponding p-value is 0.9875 ( $df= 2$ , significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.9875) is more than significance level  $\alpha= 0.05$ , there is not enough evidence to reject the null hypothesis for Czechia. The one-way ANOVA revealed that there is no significant relationship between generation X, Y, and Z, and their sustainable consumer behavior in Czechia ( $F(2, 255)= [0.01]$ ,  $p= 0.9875$ ).

Detailed test results obtained from SAS Studio can be seen in *Appendix 19*.

The null hypothesis corresponding to  $H_2$  is as follows:

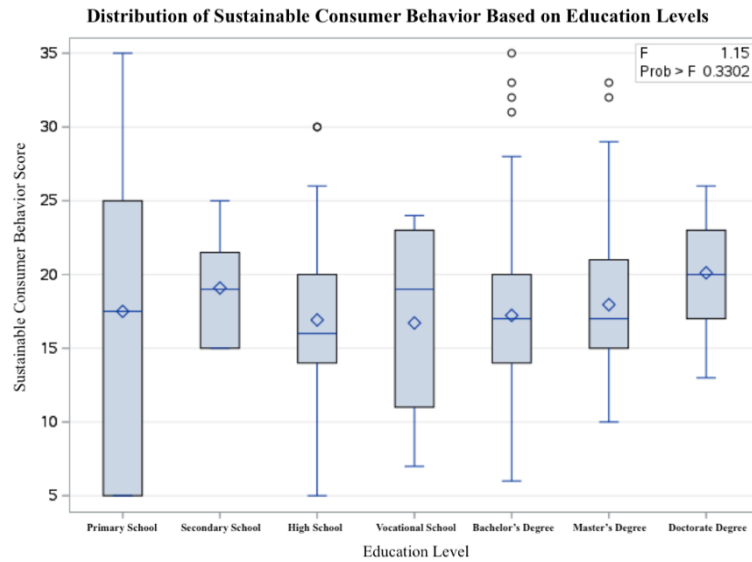
$H_0$ : There is no significant relationship between education level and sustainable consumer behavior.

The minimum and maximum values, quartiles, means, and standard deviations based on education levels are shown on *Table 4*.

EDUCATION LEVEL	Primary	Secondary	High School	Vocational	Bachelor's	Master's	Doctorate
Minimum	5	15	5	7	6	10	13
Minimum Whisker	5	15	5	7	6	10	13
1st Quartile	5	15	14	11	14	15	17
Median	17,5	19	16	19	17	17	20
3rd Quartile	25	21,5	20	23	20	21	23,0
Maximum Whisker	35	25	26	24	28	29	26
Maximum	35	25	30	24	35	33	26
Mean	17,500	19,083	16,918	16,714	17,232	17,958	20,111
Standard Deviation	11,658	3,605	4,824	6,651	4,494	4,740	4,137

*Table 4: Statistical values of categorical variables from  $H_2$ .*

The variables mentioned on the hypothesis are visualized with a boxplot of distribution of sustainable consumer behavior score across different education levels, and are shown on *Graph 2*.



*Graph 2: Boxplot of education levels and sustainable consumer behavior score.*

As in  $H_1$ , the total number of observations was 475. There were 7 different education levels: primary school (6 observations), secondary school (12 observations), high school (98 observations), vocational school (7 observations), bachelor's degree (272 observations), master's degree (71 observations), and doctorate degree (9 observations).  $\bar{x}$  for sustainable consumer behavior score was calculated as 17.5 for primary school, 19.083 for secondary school, 16.918 for high school, 16.714 for vocational school, 17.232 for bachelor's degree, 17.958 for master's degree, and 20.111 for doctorate degree. According to group means, the highest sustainable consumer behavior score is seen in doctorate degree graduates with a mean score of 20.111, and secondary school graduates are following with a mean score of 19.083; the lowest scores are seen in vocational and high school graduates, with group means of 16.714 and 16.918, respectively.

According to the one-way ANOVA test, the F value is calculated as 1.15, and the corresponding p-value is 0.3302 (df= 6, significance level=5%). Since the p-value derived from the one-way ANOVA test (0.3302) is more than significance level  $\alpha= 0.05$ , there was not enough evidence to reject the null hypothesis. The one-way ANOVA revealed that there is no statistically significant difference in sustainable consumer behavior score between different education levels (F (6, 468)= [1.15], p= 0.3302).

Detailed test results obtained from SAS Studio can be seen in *Appendix 20*.

The one-way ANOVA was conducted for the sample group of Türkiye and of Czechia individually to compare the results achieved from both countries.

There was a total of 217 observations from Türkiye, of which, 5 were primary school graduates, 6 were secondary school graduates, 33 were high school graduates, 147 had a bachelor's degree, 21 had a master's degree, and 5 had a doctorate degree.  $\bar{x}$  of sustainable consumer behavior score was calculated as 15.4 for primary school graduates, 15.334 for secondary school graduates, 18.091 for high school graduates, 18.401 for bachelor's graduates, 16.476 for master's graduates, and 19.4 for doctorate's graduates from Türkiye. The highest score was, again, observed in doctorate degree graduates, while the lowest group mean belonged to secondary school graduates. The F value for this analysis is calculated as 1.06, and the corresponding p-value is 0.3823 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.3823) is more than significance level  $\alpha= 0.05$ , there is not enough evidence to reject the null hypothesis for Türkiye. The one-way ANOVA revealed that there is no significant relationship in sustainable consumer behavior score between different education levels in Türkiye (F (2, 211)= [1.06], p= 0.3823).

Detailed test results obtained from SAS Studio can be seen in *Appendix 21*.

There was a total of 258 observations used in the ANOVA analysis from Czechia, of which, only 1 a was primary school graduate, 6 were secondary school graduates, 65 were high school graduates, 7 were vocational school graduates, 125 had a bachelor's degree, 50 had a master's degree, and 4 had a doctorate degree.  $\bar{x}$  of sustainable consumer behavior score was calculated as 21 for primary school graduates, 19 for secondary school graduates, 16.954 for high school graduates, 16.857 for vocational school graduates, 16.6 for bachelor's graduates, 16.62 for master's graduates, and 19.25 for doctorate's graduates from Czechia. The highest score was observed in the primary school graduate, and doctorate graduates were following with a mean score of 19.25, while the lowest group mean belonged to bachelor's graduates. The F value for this analysis is calculated as 0.83, and the corresponding p-value is 0.5466 (df= 6, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.5466) is more than significance level  $\alpha= 0.05$ , there is not enough evidence to reject the null hypothesis for Czechia. The one-way ANOVA revealed that there is no significant relationship in sustainable consumer behavior score between different education levels in Czechia (F (6, 251)= [0.83], p= 0.5466).

Detailed test results obtained from SAS Studio can be seen in *Appendix 22*.

The null hypothesis corresponding to  $H_3$  is as follows:

$H_0$ : There is no significant relationship between economic situation and sustainable consumer behavior.

This hypothesis is tested on two levels. A Wilcoxon Rank Sums test was applied for  $H_{0.1}$ , and a one-way ANOVA test was applied for  $H_{0.2}$ .

$H_{0.1}$ : There is no statistically significant difference between sustainable consumer behavior levels of developed and developing economies.

$H_{0.2}$ : There is no statistically significant relationship between income level and sustainable consumer behavior.

The minimum and maximum values, quartiles, means, and standard deviations of sustainable consumer behavior score based on economic development level are shown on *Table 5*.

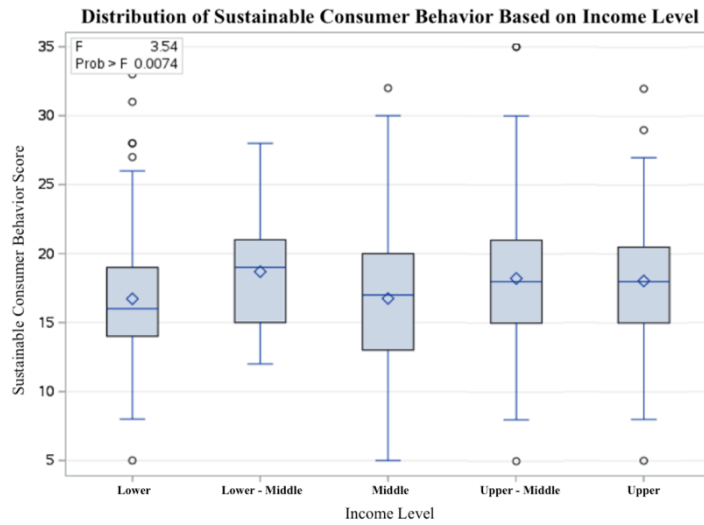
COUNTRY DEVELOPMENT STATUS	Developed	Developing
Minimum	5	5
Minimum Whisker	7	5
1st Quartile	14	14
Median	17	18
3rd Quartile	19	21
Maximum Whisker	26	31
Maximum	28	35
Mean	16,814	18,037
Standard Deviation	3,967	5,470

*Table 5: Statistical values of categorical variables from  $H_{3.1}$ .*

The total number of read observations for  $H_{0.1}$  was 475. Among these, 258 observations represented respondents from Czechia, and the remaining 217 represented respondents from Türkiye.  $\bar{x}$  for sustainable consumer behavior score was calculated as 16.814 for Czechia, and as 18.037 for Türkiye. Due to the lower purchasing power and income levels in Türkiye, these results were unexpected, and contradicted with Çelebi and Bayrakdaroğlu's arguments (2018).

According to the Wilcoxon Rank Sums test, the p-value is calculated as 0.0293 (significance level=5%). Since the p-value derived from the Wilcoxon Rank Sums test (0.0293) is less than significance level  $\alpha=0.05$ , null hypothesis is rejected. The Wilcoxon Rank Sums test revealed that there is a statistically significant difference in sustainable consumer behavior scores of developed and developing economies ( $p=0.0293$ ).

Detailed test results obtained from SAS Studio can be seen in *Appendix 23*.



Graph 3: Boxplot of income levels and sustainable consumer behavior score.

The minimum and maximum values, quartiles, means, and standard deviations of variables based on the boxplot are shown on *Table 6*.

INCOME LEVEL	Lower	Lower-Middle	Middle	Upper-Middle	Upper
Minimum	5	12	5	5	5
Minimum Whisker	8	12	5	8	8
1st Quartile	14	15	13	15	15
Median	16	19	17	18	18
3rd Quartile	19	21	20	21	20,5
Maximum Whisker	26	28	30	30	27
Maximum	33	28	32	35	32
Mean	16,722	18,690	16,747	18,235	18,050
Standard Deviation	4,329	3,883	5,036	5,404	5,262

Table 6: Statistical values of categorical variables from  $H_{3,2}$ .

Since the related question was not mandatory to respond, the total number of read observations for  $H_{0,2}$  was 456. There were 5 different income groups. The first group included 194 participants with an average monthly income less than minimum wage, 8500 TRY or 17300 CZK (referred as ‘Lower’ in *Graph 4*), second included 71 participants with an average monthly income between 8500 and 15500 TRY or 17300 and 26422 CZK (referred as ‘Lower-Middle’ in *Graph 4*), third included 83 participants with an average monthly income between 15501 and 27250 TRY or 26423 and 39858 CZK (referred as ‘Middle’ in *Graph 4*), fourth included 68 participants with an average monthly income between 27251 and 50000 TRY or 39859 and 80849 CZK (referred as ‘Upper-Middle’ in *Graph 4*), and fifth included 40 participants with an average monthly income more than 50000 TRY or 80849 CZK (referred as ‘Upper’ in *Graph 4*).  $\bar{x}$  for sustainable consumer behavior score was calculated as 16.722 for the lower group, while it was 18.69 for lower-middle, 16.747 for middle, 18.235 for upper-middle, and 18.05 for upper group.



According to the one-way ANOVA test, the F value is calculated as 3.54, and the corresponding p-value is 0.0074 (df= 4, significance level=5%). Since the p-value derived from the one-way ANOVA test (0.0074) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected. The one-way ANOVA revealed that there is a statistically significant relationship between income level and sustainable consumer behavior (F (1, 451)= [3.54], p= 0.0074). However, based on the average scores, it can be observed that lower income does not necessarily mean lower sustainable consumer behavior score, and higher income does not mean that of higher. Findings from the one-way ANOVA test also revealed that there is no direct proportion between income level and sustainable consumer behavior. Thus, future research is needed in order to further investigate the relationship between income level and sustainable consumer behavior and its qualities.

Detailed test results obtained from SAS Studio can be seen in *Appendix 24*.

The one-way ANOVA was conducted for the sample group of Türkiye and of Czechia individually to compare the results achieved from both countries.

There was a total of 209 observations from Türkiye, of which, 87 were in lower, 37 were in lower-middle, 47 were in middle, 25 were in upper-middle, and 13 were in upper income group.  $\bar{x}$  of sustainable consumer behavior score was calculated as 16.552 for the lower, 19.081 for the lower-middle, 18.064 for the middle, 20.2 for the upper-middle, and 20.538 for the upper income group from Türkiye. The highest mean score was observed in the highest income group, while the lowest mean score was in the lowest, however, not all comparisons yielded the result of upper income groups being more sustainable in their consumer behavior compared to that of lower. The F value for this analysis is calculated as 8.89, and the corresponding p-value is 0.0046 (df= 4, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0046) is less than significance level  $\alpha= 0.05$ , the null hypothesis is rejected for Türkiye. The one-way ANOVA revealed that there is a statistically significant relationship between income level and sustainable consumer behavior in Türkiye (F (4, 204)= [3.89], p= 0.0046).

Detailed test results obtained from SAS Studio can be seen in *Appendix 25*.

There was a total of 247 observations from Czechia, of which, 107 were in lower, 34 were in lower-middle, 36 were in middle, 43 were in upper-middle, and 27 were in upper income group.  $\bar{x}$  of sustainable consumer behavior score was calculated as 16.86 for the lower,

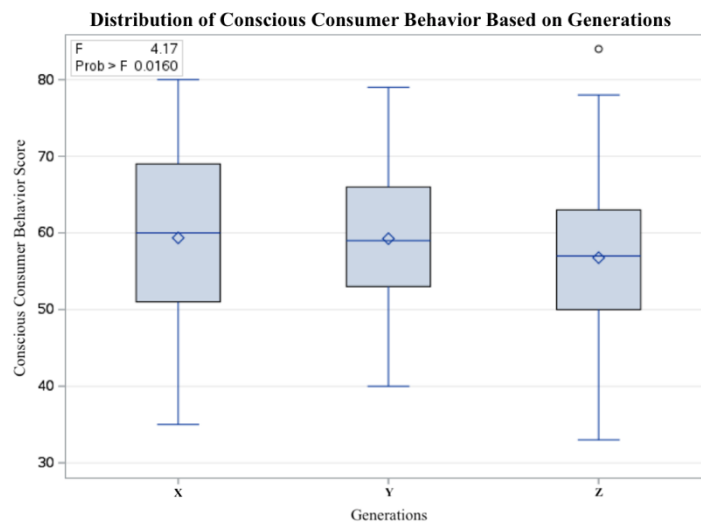
18.265 for the lower-middle, 15.028 for the middle, 17.093 for the upper-middle, and 16.852 for the upper income group from Czechia. Unlike Türkiye, the highest income group did not obtain the highest mean score, and the lowest income group did not obtain the lowest score in Czechia. There were no observed proportions between income levels and mean sustainable consumer behavior scores. The F value for this analysis is calculated as 3.14, and the corresponding p-value is 0.0153 (df= 4, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0153) is less than significance level  $\alpha= 0.05$ , the null hypothesis is rejected for Czechia, as well. The one-way ANOVA revealed that there is a statistically significant relationship between income level and sustainable consumer behavior in Czechia (F (4, 242)= [3.14], p= 0.0153).

Detailed test results obtained from SAS Studio can be seen in *Appendix 26*.

The null hypothesis corresponding to  $H_4$  is as follows:

$H_0$ : There is no significant relationship between generations and their conscious consumer behavior.

The variables mentioned on the hypothesis are visualized with a boxplot of distribution of conscious consumer behavior score across generations, and are shown on *Graph 4*.



*Graph 4: Boxplot of generations and conscious consumer behavior score.*

The minimum and maximum values, quartiles, means, and standard deviations of variables based on the boxplot are shown on *Table 7*.

GENERATION	X	Y	Z
Minimum	35	40	33
Minimum Whisker	35	40	33
1st Quartile	51	53	50
Median	60	59	57
3rd Quartile	69	66	63
Maximum Whisker	80	79	78
Maximum	80	79	84
Mean	59,355	59,253	56,772
Standard Deviation	11,431	8,927	9,173

Table 7: Statistical values of categorical variables from  $H_4$ .

The number of observations was 475 in total, of which 263 were Gen Z, 150 were Gen Y, and the remaining 62 were Gen X.  $\bar{x}$  of conscious consumer behavior score was calculated as 56.772 for Gen Z, 59.253 for Gen Y, and 59.355 for Gen X.

Based on the one-way ANOVA test, the F value is calculated as 4.17, and the corresponding p-value is 0.0160 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0160) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected. The one-way ANOVA revealed that there is a statistically significant difference in mean conscious consumer behavior score between generation X, Y, and Z, and that there is a significant relationship between generations and their conscious consumer behavior (F (2, 472)= [4.17], p= 0.0160). These results were surprising, since  $\bar{x}$  of generation Z and Y were very close, however, the test supported  $H_4$ . Older generations were observed to be more conscious in their consumer behavior than younger generations in all comparisons.

Detailed test results obtained from SAS Studio can be seen in *Appendix 27*.

The one-way ANOVA was conducted for the sample group of Türkiye and of Czechia individually to compare the results achieved from both countries.

There was a total of 217 observations from Türkiye, of which, 98 were Gen Z, 60 were Gen Y, and 59 were Gen X.  $\bar{x}$  of conscious consumer behavior score was calculated as 56.102 for Gen Z, 59.85 for Gen Y, and 59.424 for Gen X participants from Türkiye, yielding very close mean scores for Gen Y and Gen X. The F value for this analysis is calculated as 3.58, and the corresponding p-value is 0.0297 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0297) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected for Türkiye. The one-way ANOVA revealed that there is a significant relationship between generation X, Y, and Z, and their conscious consumer behavior in Türkiye (F (2, 214)= [3.58], p= 0.0297).

Detailed test results obtained from SAS Studio can be seen in *Appendix 28*.

There was a total of 258 observations used in the ANOVA analysis from Czechia, of which, 165 were Gen Z, 90 were Gen Y, and only 3 were Gen X.  $\bar{x}$  of conscious consumer behavior score was calculated as 57.17 for Gen Z, 58.856 for Gen Y, and 58 for Gen X participants from Czechia. The F value for this analysis is calculated as 0.98, and the corresponding p-value is 0.3759 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.3759) is more than significance level  $\alpha= 0.05$ , there is not enough evidence to reject the null hypothesis for Czechia. The one-way ANOVA revealed that there is no significant relationship between generation X, Y, and Z, and their conscious consumer behavior in Czechia (F (2, 255)= [0.98], p= 0.3759).

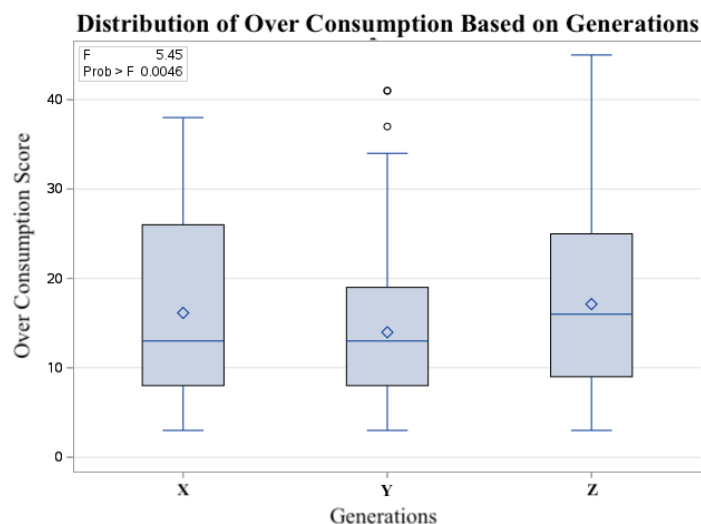
Detailed test results obtained from SAS Studio can be seen in *Appendix 29*.

The null hypotheses corresponding to  $H_{5.1}$  and  $H_{5.2}$  are as follows:

$H_{0.1}$ : There is no significant difference between the intensity of overconsumption caused by external factors among generations.

$H_{0.2}$ : There is no significant difference between the intensity of overconsumption caused by external factors among Czechia and Türkiye.

The variables mentioned on  $H_{5.1}$  are visualized with boxplots of distribution of over consumption score across generations, and are shown on *Graph 5*.



*Graph 5: Boxplot of generations and over consumption score.*

The minimum and maximum values, quartiles, means, and standard deviations of variables based on the boxplot are shown on *Table 8*.

GENERATIONS	X	Y	Z
Minimum	3	3	3
Minimum Whisker	3	3	3
1st Quartile	8	8	9
Median	13	13	16
3rd Quartile	26	19	25
Maximum Whisker	38	34	45
Maximum	38	41	45
Mean	16,145	13,980	17,129
Standard Deviation	10,614	8,118	9,648

Table 8: Statistical values of categorical variables from  $H_{5,1}$ .

The number of observations was 475 in total, of which 263 were Gen Z, 150 were Gen Y, and the remaining 62 were Gen X.  $\bar{x}$  of over consumption score was calculated as 17.129 for Gen Z, 13.98 for Gen Y, and 16.145 for Gen X.

Based on the one-way ANOVA test, the F value is calculated as 5.45, and the corresponding p-value is 0.0046 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0046) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected. The one-way ANOVA revealed that there is a statistically significant difference in mean over consumption score between generation X, Y, and Z, and that there is a significant relationship between generations and their over consumption behavior caused by external factors ( $F(2, 472)= [5.45]$ ,  $p= 0.0046$ ).

Detailed test results obtained from SAS Studio can be seen in *Appendix 30*.

The one-way ANOVA was conducted for the sample group of Türkiye and of Czechia individually to compare the results achieved from both countries.

There was a total of 217 observations from Türkiye, of which, 98 were Gen Z, 60 were Gen Y, and 59 were Gen X.  $\bar{x}$  of over consumption score was calculated as 21.296 for Gen Z, 15.95 for Gen Y, and 16.322 for Gen X participants from Türkiye. The F value for this analysis is calculated as 7.58, and the corresponding p-value is 0.0007 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.0007) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected for Türkiye. The one-way ANOVA revealed that there is a significant relationship between generations and their over consumption behavior caused by external factors in Türkiye ( $F(2, 214)= [7.58]$ ,  $p= 0.0007$ ). Detailed test results obtained from SAS Studio can be seen in *Appendix 31*.

There was a total of 258 observations used in the ANOVA analysis from Czechia, of which, 165 were Gen Z, 90 were Gen Y, and only 3 were Gen X.  $\bar{x}$  of over consumption score was

calculated as 14.655 for Gen Z, and as 12.667 for Gen Y and for Gen X participants from Czechia. The F value for this analysis is calculated as 1.70, and the corresponding p-value is 0.1854 (df= 2, significance level= 5%). Since the p-value derived from the one-way ANOVA test (0.1854) is more than significance level  $\alpha= 0.05$ , there is not enough evidence to reject the null hypothesis for Czechia. The one-way ANOVA revealed that there is no significant relationship between generations and their over consumption behavior caused by external factors in Czechia (F (2, 255)= [1.70], p= 0.1854). This outcome wasn't unexpected since the mean over consumption scores of Gen Y and Gen X were equal.

Detailed test results obtained from SAS Studio can be seen in *Appendix 32*.

The minimum and maximum values, quartiles, means, and standard deviations of over consumption score based on countries are shown on *Table 9*.

	Czechia	Türkiye
<b>Minimum</b>	3	3
<b>Minimum Whisker</b>	3	3
<b>1st Quartile</b>	8	10
<b>Median</b>	13	18
<b>3rd Quartile</b>	19	26
<b>Maximum Whisker</b>	35	45
<b>Maximum</b>	39	45
<b>Mean</b>	13,938	18,465
<b>Standard Deviation</b>	8,345	10,026

*Table 9: Statistical values of categorical variables from H<sub>5.2</sub>.*

The total number of observations for H<sub>0.2</sub> was 475. Among these, 258 observations represented respondents from Czechia, and the remaining 217 represented respondents from Türkiye.  $\bar{x}$  for over consumption score was calculated as 13.938 for Czechia, and as 18.465 for Türkiye.

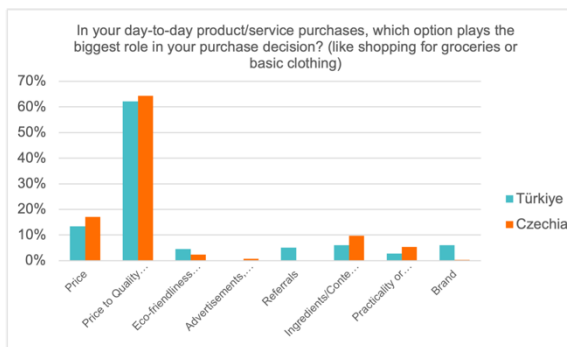
According to the Wilcoxon Rank Sums test, the two-sided p-value is less than 0.0001 (significance level=5%). Since the p-value derived from the Wilcoxon Rank Sums test (<0.0001) is less than significance level  $\alpha= 0.05$ , null hypothesis is rejected. The Wilcoxon Rank Sums test revealed that there is a statistically significant difference in the intensity of over consumption caused by external factors of Czechia and Türkiye (p<0.0001).

Detailed test results obtained from SAS Studio can be seen in *Appendix 33*.

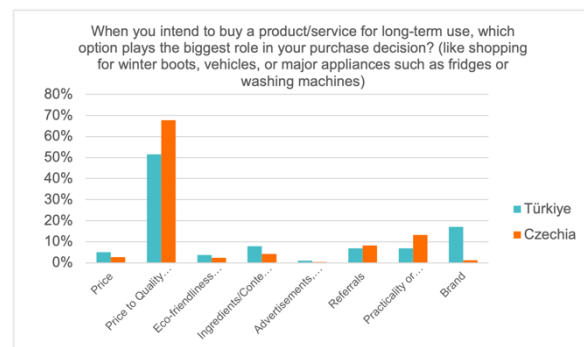
## 5.1 Comparison of Questionnaire Responses

When the answers to each question of the questionnaire are examined individually, there are numerous significant differences that can be observed between the consumer behavior of participants from Czechia and Türkiye. To compare consumer behaviors of participants from these countries, the responses gathered via the questionnaire were formed into charts.

The charts found on this chapter were chosen since the difference between consumer behaviors of Türkiye and Czechia were most evident. The remaining of charts showing the distribution of answers to questions by country are included in Appendix (*Appendix 34-43*).



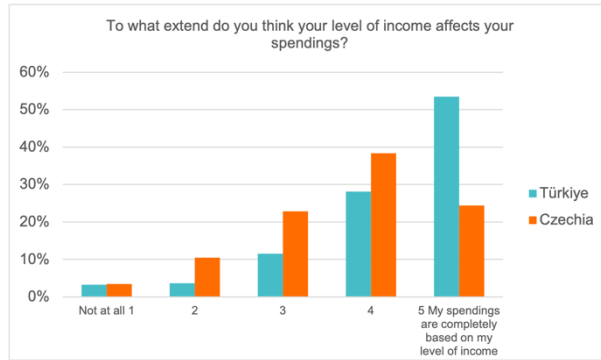
Graph 6: Answers to question 6.



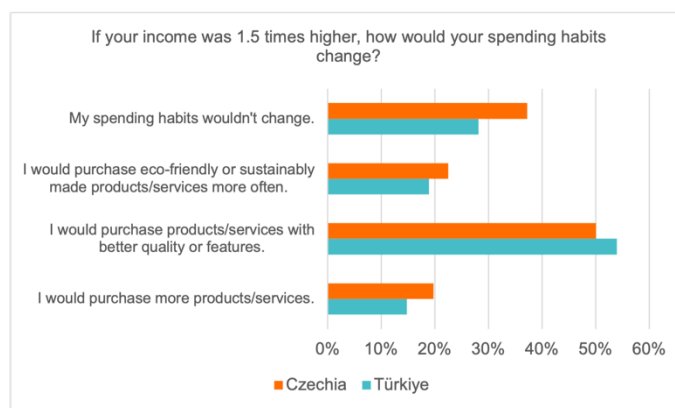
Graph 7: Answers to question 7.

Based on the responses to questions 6 and 7, it can be concluded that the most important factor in purchase decision is price to quality ratio for majority of respondents. The biggest difference between two countries is the role brand plays in purchase decision: for question 6, 13 respondents (6%) from Türkiye stated the most important factor in their purchase decision is brand, while only 1 respondent (0.4%) stated the same from Czechia, and for question 7, 37 respondents (17%) from Türkiye stated the most important factor in their purchase decision is brand, while the number was only 3 (1.2%) for respondents from Czechia (see *Graph 6-7*).

It is noteworthy that more than half of the respondents (53.5%, 116 respondents) from Türkiye stated that their spendings are completely based on their level of income, which is a ratio that cannot be ignored. The ratio is at 24.4% for Czechia (63 respondents) (see *Graph 8*).

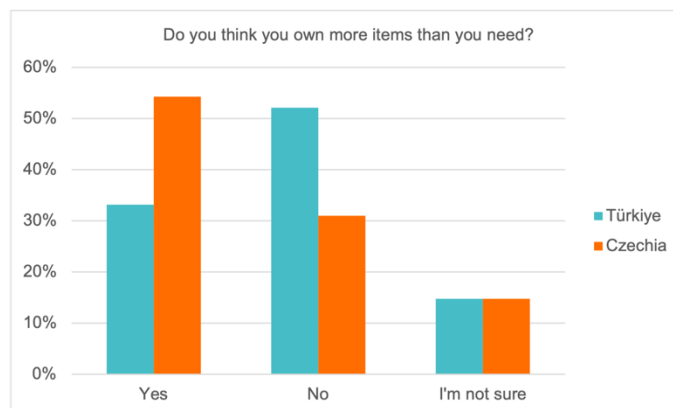


Graph 8: Answers to question 9.



Graph 9: Answers to question 10.

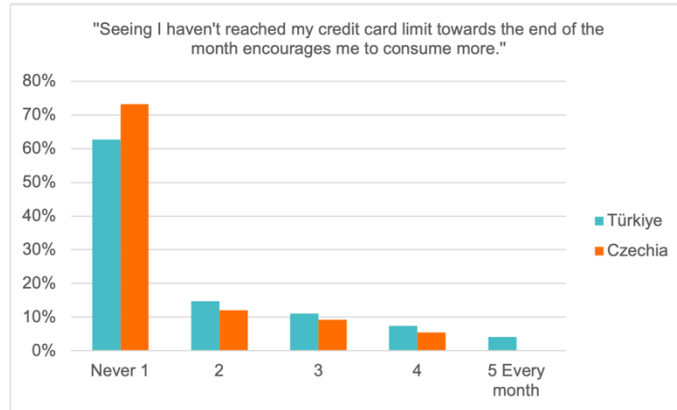
The mean sustainable consumer behavior score is calculated as 16.814 for Czechia, and as 18.056 for Türkiye. Based on the mean scores, prediction would be that participants from Türkiye would purchase eco-friendly or sustainably made products/services more often if their income was higher. However, *Graph 9* shows the opposite. Participants from Czechia are proved to be more prone to purchasing eco-friendly or sustainably made products.



Graph 10: Answers to question 11.

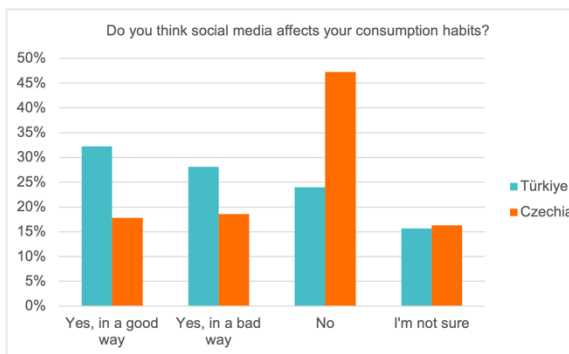


Another major difference between Czech and Turkish participants is their answers to Question 11, which can be seen on *Graph 10*. According to the graph, majority of Czech participants (54.3%, 140 participants) states they own more items than they need, while majority of Turkish participants (52.1%, 113 participants) state the opposite.

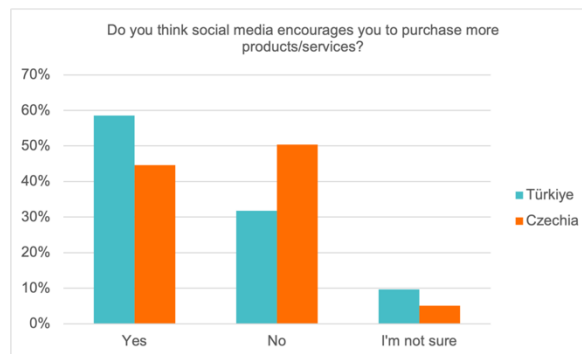


*Graph 11: Answers to question 14.*

*Graph 11* visualizes the answers to Question 14. The graph suggests that a big portion of the respondents (62.7% of Turkish and 73.3% of Czech) does not get encouraged by their credit card limit being not reached at the end of the month. One of the most obvious difference for this question between countries is observed on the response ‘5: Every month’, since there are 9 respondents from Türkiye (4.2%) choosing this option, and 0 from Czechia.



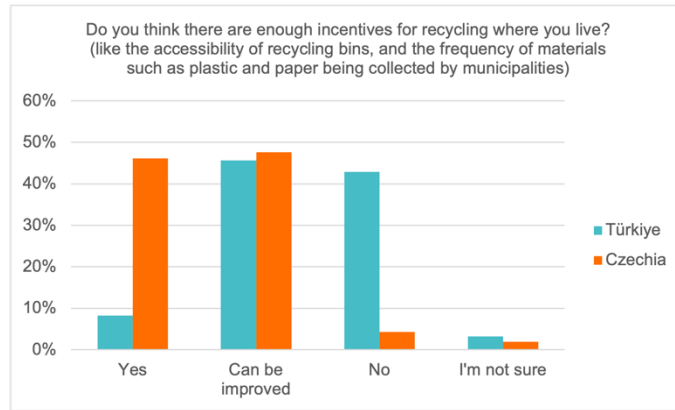
*Graph 12: Answers to question 18.*



*Graph 13: Answers to question 19.*

Based on *Graph 12* and *13*, it can be observed that participants from Türkiye are getting affected by social media in their consumer behavior more than participants from Czechia (total participants getting affected, Türkiye: 60.4%, 131 participants; total participants getting affected, Czechia: 36.4%, 94 participants). Furthermore, among the participants from Czechia who state they are affected by social media in their consumption habits, the bigger

proportion belongs to the group who states social media affects their consumption habits badly (18.6%, 48 participants) rather than goodly (17.8%, 46 participants), while the case is the opposite for Türkiye.



Graph 14: Answers to question 20.

The last major difference is observed on Question 20, shown on *Graph 14*. According to the answers, only 8.3% of Turkish participants (18 participants) think the incentives for recycling are enough where they live. Furthermore, only 4.3% of Czech participants (11 participants) think the incentives for recycling are not enough where they live. Based on these responses, it would be logical to see a lower mean sustainable consumer behavior score in the sample group of Türkiye than Czechia, however, the mean scores were 18.056 for Türkiye and 16.814 for Czechia (see *Graph 14*).

## 6 Results and Discussion

Hypotheses were tested with suitable statistical methods.

Based on test results, one-way ANOVA test rejected the null hypothesis of  $H_1$ . According to the one-way ANOVA, there is a statistically significant difference in mean sustainable consumer behavior score between different generations, and that there is a significant relationship between generation X, Y, and Z, and their sustainable consumer behavior ( $F(2, 472) = [7.64]$ ,  $p = 0.0005$ ). The mean sustainable consumer behavior scores of Gen X, Gen Y, and Gen Z are 19.29, 17.64, and 16.768, respectively. Thus, the additional observation of older generations being more sustainable in their consumer behavior compared to younger generations can be stated.

This observation is supported by the one-way ANOVA test which was done only on the sample group from Czechia. On the other hand, the mean sustainable consumer behavior scores retrieved from the one-way ANOVA only done on the sample group from Türkiye were 16.673 for Gen Z, 19.237 for Gen Y, and 19.153 for Gen X, not providing any supportive arguments for the observation, since no proportion can be seen on older generations being more sustainable on their consumer behavior and vice versa.

Based on the one-way ANOVA tests conducted individually for both countries, there is a significant relationship between generation X, Y, and Z, and their sustainable consumer behavior in Türkiye ( $F(2, 213) = [5.93]$ ,  $p = 0.0031$ ), while the significant relationship is nonexistent in Czechia ( $F(2, 255) = [0.01]$ ,  $p = 0.9875$ ).

According to the one-way ANOVA test, there is not enough evidence to reject the null hypothesis of  $H_2$ . Based on the findings, there is no statistically significant difference in sustainable consumer behavior score between different education levels ( $F(6, 468) = [1.15]$ ,  $p = 0.3302$ ). However, the highest mean sustainable consumer score, 20.111, belongs to the group with the highest education level. No further relationship was observed.

In addition, the one-way ANOVA tests done on each country individually revealed the same results, that there is no significant relationship in sustainable consumer behavior score between different education levels in Türkiye ( $F(2, 211) = [1.06]$ ,  $p = 0.3823$ ) and in Czechia ( $F(6, 251) = [0.83]$ ,  $p = 0.5466$ ).

Null hypothesis of  $H_{3.1}$  was rejected by the Wilcoxon Rank Sums test. Based on the test, there is a statistically significant difference sustainable consumer behavior scores of developed and developing economies ( $p= 0.0293$ ). The mean sustainable consumer behavior score of Türkiye, 18.037, was higher than of Czechia, 16.814.

The one-way ANOVA test rejected the null hypothesis of  $H_{3.2}$ , revealing the statistically significant relationship between income level and sustainable consumer behavior ( $F(1, 451)= [3.54]$ ,  $p= 0.0074$ ). On the other hand, the group means did not show a direct or inverse proportion between income levels and sustainable consumer behavior scores. Nevertheless, the lowest mean sustainable consumer behavior score was seen in the group with the lowest average monthly income.

Similarly, the one-way ANOVA test done only on the sample group from Türkiye showed that the highest mean score was seen in the highest income group, while the lowest score was seen in the lowest group. The outcomes were different in Czechia: the lowest and highest scores were seen in middle income groups, rather than the lowest and highest. In both analyses, group means did not show a proportion between variables. Supporting the first test done cumulatively on both countries, the one-way ANOVA tests done individually on the sample groups rejected the null hypotheses for Türkiye and for Czechia. Based on the tests, there is a statistically significant relationship between income level and sustainable consumer behavior in Türkiye ( $F (4, 204)= [3.89]$ ,  $p= 0.0046$ ) and in Czechia ( $F (4, 242)= [3.14]$ ,  $p= 0.0153$ ).

The null hypothesis of  $H_4$  was rejected by the one-way ANOVA test. According to the test results, there is a significant relationship between generations and their conscious consumer behavior ( $F (2, 472)= [4.17]$ ,  $p = 0.0160$ ). Similar to  $H_1$ , a direct proportion is observed between generations and their conscious consumer behavior: mean conscious consumer behavior scores of Gen X, Gen Y, and Gen Z are 59.355, 59.253, and 56.772, respectively. The additional observation of older generations being more conscious in their consumer behavior compared to younger generations can be stated.

However, the one-way ANOVA tests conducted on both countries individually did not provide any evidence of older generations being more conscious in their consumer behavior ( $\bar{x}$  in Türkiye: Gen Z= 56.102, Gen Y= 59.85, Gen X= 59.424;  $\bar{x}$  in Czechia: Gen Z= 57.17, Gen Y= 58.856, Gen X= 58). The one-way ANOVA test in Türkiye rejected null hypothesis,

revealing the statistically significant relationship between generation X, Y, and Z, and their conscious consumer behavior in Türkiye ( $F(2, 214) = [3.58], p = 0.0297$ ); while the test in Czechia failed to reject null hypothesis, suggesting there is no significant relationship between generation X, Y, and Z, and their conscious consumer behavior in Czechia ( $F(2, 255) = [0.98], p = 0.3759$ ).

The one-way ANOVA test rejected the null hypothesis of  $H_{5.1}$ . Based on the results of the test, there is a statistically significant relationship between generations and their over consumption behavior ( $F(2, 472) = [5.45], p = 0.0046$ ). Mean over consumption scores of generations, 16.145 for Gen X, 13.98 for Gen Y, and 17.129 for Gen Z, provided no evidence to observe that older generations over consume less than younger generations, and vice versa.

Parallel to the first one-way ANOVA test for  $H_{5.1}$ , the test done on Türkiye rejected the null hypothesis and provided no evidence to observe that older generations over consume less than younger generations, and vice versa. The test revealed the significant relationship between generations and their over consumption behavior caused by external factors in Türkiye ( $F(2, 214) = [7.58], p = 0.0007$ ). However, the one-way ANOVA done on Czechia failed to reject null hypothesis, revealing that there is no significant relationship between generations and their over consumption behavior caused by external factors in Czechia ( $F(2, 255) = [1.70], p = 0.1854$ ).

The null hypothesis of  $H_{5.2}$  was rejected by the Wilcoxon Rank Sums test. The test revealed the statistically significant difference in the intensity of over consumption levels caused by external factors in Czechia and in Türkiye ( $p < 0.0001, \alpha = 0.05$ ). The mean over consumption scores of Czechia and Türkiye are 13.938 and 18.465, respectively.

When compared, responses to each questionnaire question revealed the differences between the consumer behaviors of participants from two different countries. Observed responses played a key role in concluding the existence of differences in sustainable and conscious consumer behaviors of consumers from Czechia and Türkiye, giving important insight on topic.

## 6.1 Limitations of Study and Recommendations for Future Research

Consumer behavior is a complex topic with many different variables affecting one's overall consumption behavior and patterns. The way people are brought up, the cultures in which they live, their own preferences, their opportunities and capabilities can cumulatively affect people's consumer behavior, or these behaviors can completely be determined by one or some of the variables. Thus, the results of the study cannot be generalized beyond the sample group, however, they provide a more in-depth understanding of participants' motivations, habits, and their behaviors in consumption.

Due to time constraints, the research was cross-sectional, which might have been influencing on the results of the questionnaire. If, due to any situational factors, the participants were influenced by the current agenda at the time of the research, the results may have been manipulated. Thus, conducting studies in which participants are observed in the long term may help draw more accurate results.

As mentioned in 'Representativeness of Sample Group', education systems in Czechia and in Türkiye differs from each other, and taking two different education systems and structures into account might have resulted in less accurate results. Furthermore, there were difficulties in reaching the target groups: since the method of this study included an online survey, only people with access to internet and technology could be reached (100% of the population in both countries have access to electricity, while 83% of the population in Czechia and 81% in Türkiye are using the internet (wordlbank.org)).

<b>Hypothesis I</b>	Gen X	62	<b>Hypothesis III.II</b>	Lower Income	194
	Gen Y	150		Lower-Middle Income	71
	Gen Z	263		Middle Income	83
<b>Hypothesis II</b>	Primary School	6	<b>Hypothesis IV.I</b>	Upper-Middle Income	68
	Secondary School	12		Upper Income	40
	High School	98	<b>Hypothesis IV.II</b>	Gen X	62
	Vocational School	7		Gen Y	150
	Bachelor's Degree	272		Gen Z	263
	Master's Degree	71	<b>Hypothesis III.I</b>	Czechia	258
Doctorate Degree	9	Türkiye		218	
<b>Hypothesis III.I</b>	Czechia	258			
	Türkiye	218			

Table 10: Sample sizes of each sub-group according to hypotheses.

Additionally, the distribution of participant profile demographically was not representative of the populations of Türkiye and Czechia. Number of observations for each sub-group, categorized according to hypotheses can be seen on *Table 10*. Due to the different sizes of sub-groups, statistical tests might have been less accurate than they could've been in a case where sizes of sub-groups were identical, or representative of the total population of countries within the hypotheses.

Future research can consider the feedback received throughout this study as recommendations. Feedback received from respondents are as follows:<sup>1</sup>

“Since respondents cannot choose multiple options for question 6 and 7 (see appendix), I choose the option ‘Price to Quality ratio’. However, price to quality ratio is not always the most important thing in my purchase decision. Additionally, I’d like to mention why I did not choose ‘Eco-friendliness or sustainable production’ in mentioned questions: I believe companies put higher prices for eco-friendly/sustainably made products/services, even though they do not cost higher than regular products. I don’t like the attitude they employ in this matter, thus, don’t buy those products and don’t intentionally support them. However, there are some products I buy occasionally that are eco-friendly/sustainably made, and I also put my best effort to recycle my waste.”

“If the time horizon in question 16 (see appendix) with the statement ‘have you ever’ was specified, it would be wiser, in my opinion. I personally have bought a few sweatshirts from my favorite bands many (more than 15) years ago, however, I wouldn’t do that now.”

The respondent was informed that people’s consumption patterns change throughout their life, and such purchases are mostly seen in younger consumers, frequently related to reference groups and lower self-esteem; and that the questions were thought to be specific in time (horizon), but at the end, the goal of the questions were to observe whether consumers, throughout their life, were influenced by the consumerist societies of today’s world.

*1: All respondents who provided feedback were asked whether they approve the inclusion of their feedback on the thesis, and the ones who approve were informed of their feedback being published.*

“In Czech Republic, not many people use credit cards.”

“This was a well-made survey! However, most Czechs do not use credit cards, they use debit card only.”

“Credit cards are extremely rare in Czech Republic; most cards are debit cards.”

“According to the National Banks 2021 statistics, the total number of cards is 14.5 million and of those, 1.4 million are credit cards (Source: [https://www.cnb.cz/cs/statistika/menova\\_bankovni\\_stat/harm\\_stat\\_data/komentar-ke-statistice-platebniho-styku/index.html](https://www.cnb.cz/cs/statistika/menova_bankovni_stat/harm_stat_data/komentar-ke-statistice-platebniho-styku/index.html)) and that number is declining. This means the ratio of credit cards to all cards is under 10%, which is a relatively small proportion, however, it's not non-existent.”

The respondents were informed that the study was focused on Türkiye and Czechia, and that the goal of the research was to observe the differences between consumption patterns and consumer behavior in the mentioned countries.

“In my opinion, evaluation of the questionnaire result would be easier and more accurate if all questions were in the same format. Some questions were Likert scale, some were multiple choice questions with 3 or 4 options. Formatting all questions in the same way would be beneficial.”

The respondent was informed of the ‘Formatting and Scoring of the Questionnaire’.

“It could be interesting if the questionnaire included a text field where participants could elaborate their answers/opinions. Additionally, individuals aren't responsible for consumption, within reason, because the fundamental issue is infrastructure. For example, I use public transport because I live in Prague, but if I lived somewhere without public transportation, I'd have to use a car. As a consumer, I am not responsible for the existence of public transport infrastructure. Maybe, as a democratic citizen, I can be considered responsible for my votes since it's politics that determines the infrastructure. I believe the situation with plastic bags is the same: plastics should not be used as widely as they are, and legislation should reduce the use of plastics, however, good anti-plastic legislation would be bad for the plastic industry. If the problem is individualized to the level of consumer, the solution will no longer be sensible and effective, and it's not going to be legislations that decreases the use of plastic, but rather consumers simply recycling and reusing more.”



## **7 Conclusion**

This research aimed to identify the concepts of ‘sustainable consumer behavior’, ‘conscious consumer behavior’ and ‘over consumption’, and the relationships between demographic characteristics and sustainable consumer behavior, conscious consumer behavior and over consumption habits of respondents from Türkiye and Czechia. The main research questions were ‘Are demographic traits of consumers related to sustainable consumer behavior?’, ‘Are demographic traits of consumers related to conscious consumer behavior?’ and ‘Is over consumption affected by external factors more frequent in any of the demographic groups?’.

Based on analysis conducted with data gathered from respondents, it can be concluded that groups with different demographic features, such as generation and income level, employ sustainable and/or conscious consumer behavior in different ways or intensities, and that consumers from different countries with different backgrounds, cultures, and economic development levels, reflect differences in their consumer behavior. In business practices, the findings of this study can be used when entering new markets in different countries. Based on the outcomes of this research, it can be confidently said that in decision-making processes, businesses should evaluate how the behaviors of consumers from different countries differ from each other. Understanding the consumption habits and consumer behavior of the business’ target market plays a crucial role on the path to success.

The methodology of this study was chosen with the aim of minimizing sampling bias, and providing accurate results; however, some features of it also limits the generalizability of the findings. Despite the limitations, the research provides new insights into sustainable and conscious consumer behaviors of consumers in Czechia and Türkiye, and illustrates the relationships between demographic characteristics and consumption habits, while raising new questions of how economic constraints and education level relate to sustainable consumer behavior on an individual level, if relevant, since the findings obtained from previous research and from this study differ from each other, and do not support one another cumulatively.

To better understand the implications of the results of this study, future research could address the newly raised questions, and could consider the feedback of respondents provided in the study.

This thesis tested previous findings from other studies and introduced insights, especially for the countries where the study was conducted in. In doing so, this thesis contributes to literature by revising the ways sustainable consumer behavior, conscious consumer behavior, and over consumption relates to demographics factors, and aims to encourage consumers to reflect on their consumer behaviors, and to motivate them to consider the effects of their consumer behavior, both for themselves, the environment, and future generations.

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## 9 List of Tables and Graphs

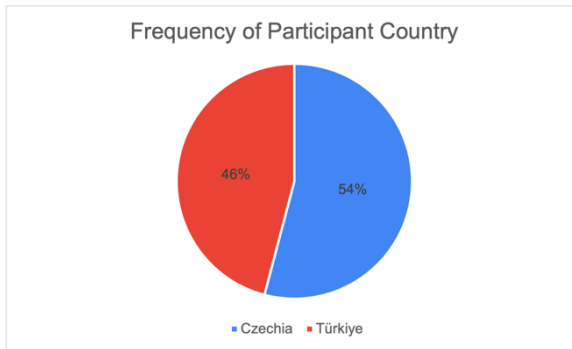
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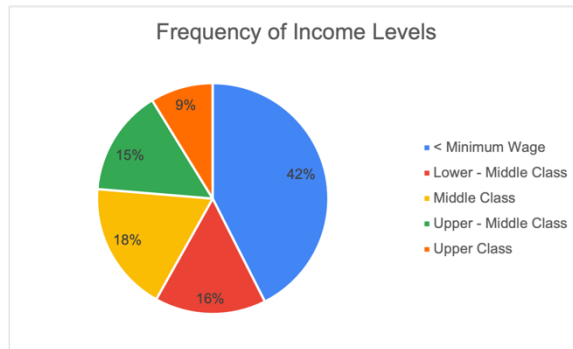
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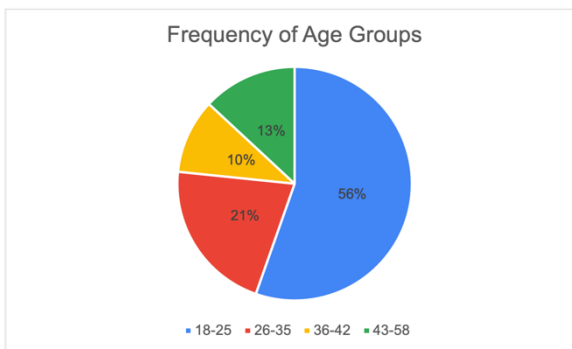
# Appendix



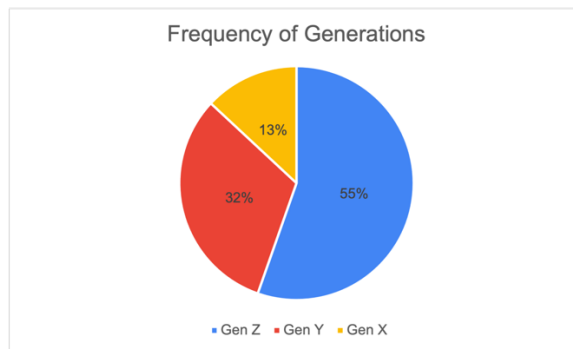
Appendix 1



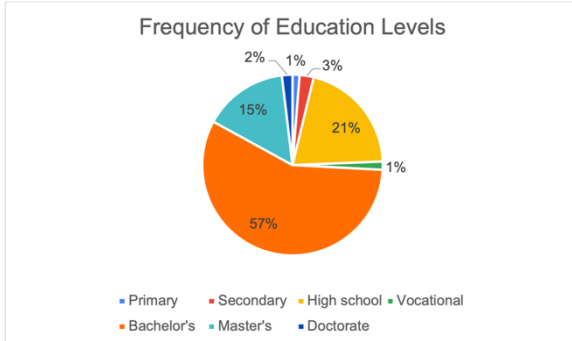
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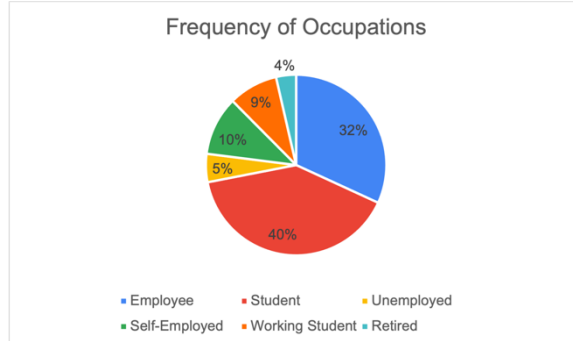
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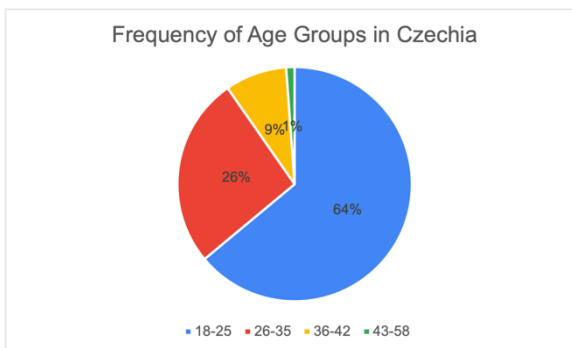
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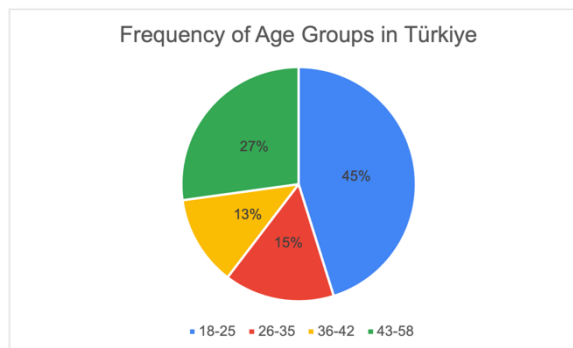
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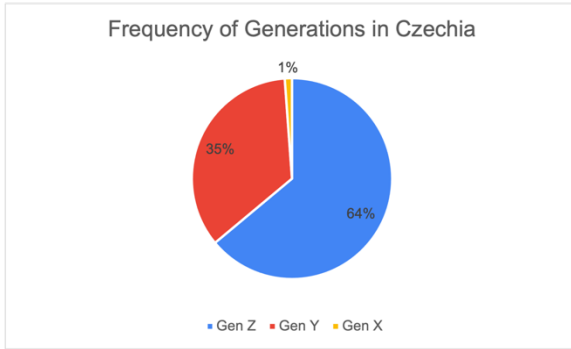


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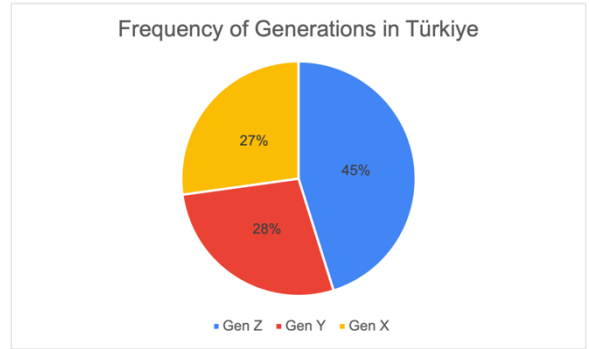


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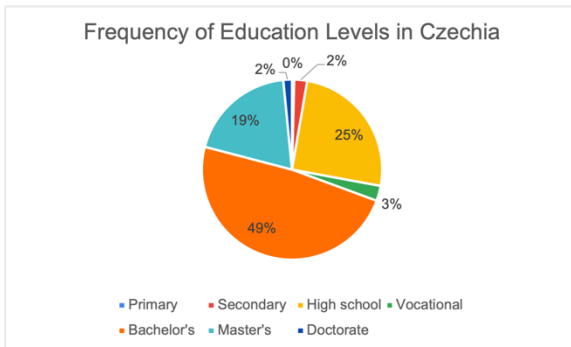




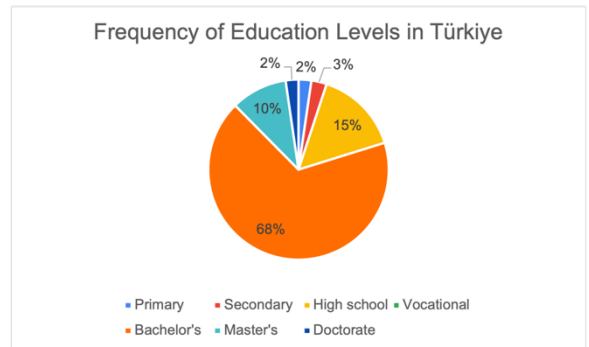
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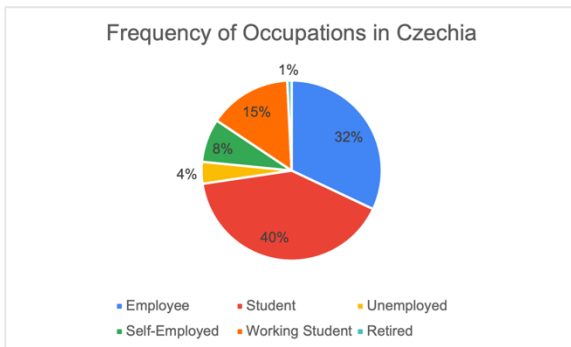
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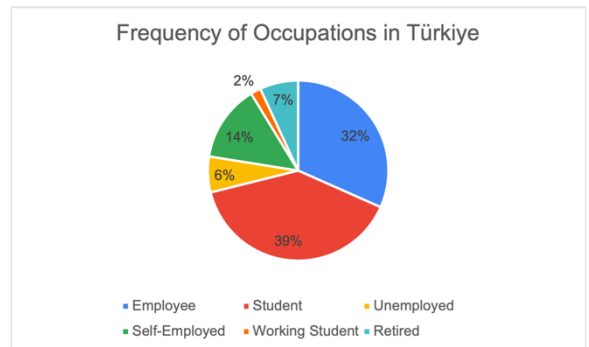
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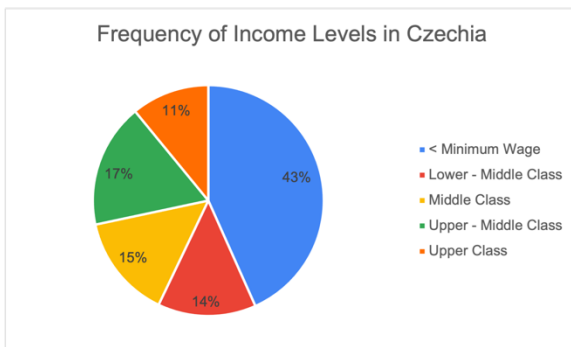
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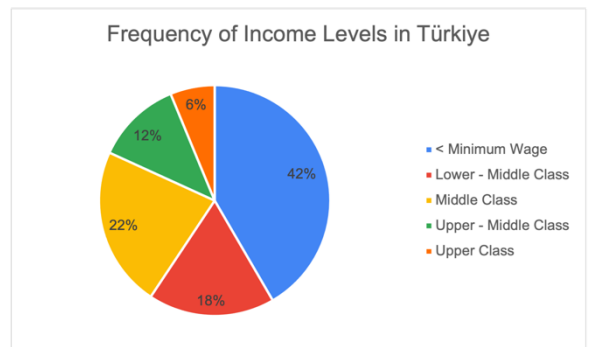
Appendix 13



Appendix 14



Appendix 15



Appendix 16

Dependent Variable: SCB\_Score

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	334.85831	167.42915	7.64	0.0005
Error	472	10348.18590	21.92412		
Corrected Total	474	10683.04421			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.031345	26.95228	4.682320	17.37263

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	334.8583060	167.4291530	7.64	0.0005

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	334.8583060	167.4291530	7.64	0.0005

Appendix 17: One-way ANOVA test results of  $H_1$ , done on SAS Studio.

Dependent Variable: SCB\_Score

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	340.583710	170.291855	5.93	0.0031
Error	213	6111.856105	28.694160		
Corrected Total	215	6452.439815			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.052784	29.67545	5.356693	18.05093

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	340.5837097	170.2918548	5.93	0.0031

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	340.5837097	170.2918548	5.93	0.0031

Appendix 18: One-way ANOVA test results of  $H_1$  for Türkiye, done on SAS Studio.

Dependent Variable: SCB\_Score

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	0.400070	0.200035	0.01	0.9875
Error	255	4044.669697	15.861450		
Corrected Total	257	4045.069767			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.000099	23.68654	3.982644	16.81395

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	0.40007047	0.20003524	0.01	0.9875

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	0.40007047	0.20003524	0.01	0.9875

Appendix 19: One-way ANOVA test results of  $H_1$  for Czechia, done on SAS Studio.

**Dependent Variable: SCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	155.68182	25.94697	1.15	0.3302
Error	468	10527.36239	22.49436		
Corrected Total	474	10683.04421			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.014573	27.30054	4.742822	17.37263

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Level_of_Education	6	155.6818171	25.9469695	1.15	0.3302

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Level_of_Education	6	155.6818171	25.9469695	1.15	0.3302

Appendix 20: One-way ANOVA test results of  $H_2$ , done on SAS Studio.

**Dependent Variable: SCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	158.686640	31.737328	1.06	0.3823
Error	211	6303.018429	29.872125		
Corrected Total	216	6461.705069			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.024558	30.30205	5.465540	18.03687

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Edu_Level	5	158.6866399	31.7373280	1.06	0.3823

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Edu_Level	5	158.6866399	31.7373280	1.06	0.3823

Appendix 21: One-way ANOVA test results of  $H_2$  for Türkiye, done on SAS Studio.

**Dependent Variable: SCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	78.821086	13.136848	0.83	0.5466
Error	251	3966.248681	15.801788		
Corrected Total	257	4045.069767			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.019486	23.64195	3.975146	16.81395

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Edu_Level	6	78.82108612	13.13684769	0.83	0.5466

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Edu_Level	6	78.82108612	13.13684769	0.83	0.5466

Appendix 22: One-way ANOVA test results of  $H_2$  for Czechia, done on SAS Studio.

Wilcoxon Two-Sample Test					
Statistic	Z	Pr > Z	Pr >  Z	t Approximation	
				Pr > Z	Pr >  Z
54895.50	2.1861	0.0144	0.0288	0.0146	0.0293

Kruskal-Wallis Test		
Chi-Square	DF	Pr > ChiSq
4.7790	1	0.0288

Appendix 23: Wilcoxon Rank Sums test results of  $H_{3,1}$ , done on SAS Studio.

Dependent Variable: SCB_Score					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	306.90079	76.72520	3.54	0.0074
Error	451	9787.97421	21.70283		
Corrected Total	455	10094.87500			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.030402	26.81225	4.658629	17.37500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Income_Level	4	306.9007881	76.7251970	3.54	0.0074

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Income_Level	4	306.9007881	76.7251970	3.54	0.0074

Appendix 24: One-way ANOVA test results of  $H_{3,2}$ , done on SAS Studio.

Dependent Variable: SCB_Score					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	430.567105	107.641776	3.89	0.0046
Error	204	5650.313278	27.697614		
Corrected Total	208	6080.880383			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.070807	29.19926	5.262852	18.02392

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Income_Level	4	430.5671048	107.6417762	3.89	0.0046

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Income_Level	4	430.5671048	107.6417762	3.89	0.0046

Appendix 25: One-way ANOVA test results of  $H_{3,2}$  for Türkiye, done on SAS Studio.

**Dependent Variable: SCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	189.991790	47.497948	3.14	0.0153
Error	242	3661.522380	15.130258		
Corrected Total	246	3851.514170			

R-Square	Coeff Var	Root MSE	SCB_Score Mean
0.049329	23.11770	3.889763	16.82591

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Income_Level	4	189.9917901	47.4979475	3.14	0.0153

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Income_Level	4	189.9917901	47.4979475	3.14	0.0153

Appendix 26: One-way ANOVA test results of  $H_{3,2}$  for Czechia, done on SAS Studio.

**Dependent Variable: CCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	740.64554	370.32277	4.17	0.0160
Error	472	41890.87867	88.75186		
Corrected Total	474	42631.52421			

R-Square	Coeff Var	Root MSE	CCB_Score Mean
0.017373	16.27292	9.420821	57.89263

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	740.6455417	370.3227709	4.17	0.0160

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	740.6455417	370.3227709	4.17	0.0160

Appendix 27: One-way ANOVA test results for  $H_4$ , done on SAS Studio.

**Dependent Variable: CCB\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	677.59036	338.79518	3.58	0.0297
Error	214	20271.03637	94.72447		
Corrected Total	216	20948.62673			

R-Square	Coeff Var	Root MSE	CCB_Score Mean
0.032345	16.76844	9.732650	58.04147

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	677.5903566	338.7951783	3.58	0.0297

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	677.5903566	338.7951783	3.58	0.0297

Appendix 28: One-way ANOVA test results for  $H_4$  for Türkiye, done on SAS Studio.

Dependent Variable: CCB\_Score

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	165.67580	82.83790	0.98	0.3759
Error	255	21508.37071	84.34655		
Corrected Total	257	21674.04651			

R-Square	Coeff Var	Root MSE	CCB_Score Mean
0.007644	15.89829	9.184038	57.76744

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	165.6758046	82.8379023	0.98	0.3759

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	165.6758046	82.8379023	0.98	0.3759

Appendix 29: One-way ANOVA test results for  $H_4$  for Czechia, done on SAS Studio.

Dependent Variable: OCS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	948.74294	474.37147	5.45	0.0046
Error	472	41080.23811	87.03440		
Corrected Total	474	42028.98105			

R-Square	Coeff Var	Root MSE	OCS Mean
0.022574	58.28464	9.329223	16.00632

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	948.7429415	474.3714708	5.45	0.0046

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	948.7429415	474.3714708	5.45	0.0046

Appendix 30: One-way ANOVA test results for  $H_{5,1}$ , done on SAS Studio.

Dependent Variable: OC\_Score

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	1435.84106	717.92053	7.58	0.0007
Error	214	20278.14972	94.75771		
Corrected Total	216	21713.99078			

R-Square	Coeff Var	Root MSE	OC_Score Mean
0.066125	52.71663	9.734357	18.46544

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	1435.841060	717.920530	7.58	0.0007

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	1435.841060	717.920530	7.58	0.0007

Appendix 31: One-way ANOVA test results for  $H_{5,1}$  for Türkiye, done on SAS Studio.

**Dependent Variable: OC\_Score**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	235.03199	117.51600	1.70	0.1854
Error	255	17663.97576	69.27049		
Corrected Total	257	17899.00775			

R-Square	Coeff Var	Root MSE	OC_Score Mean
0.013131	59.71372	8.322890	13.93798

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Generation	2	235.0319944	117.5159972	1.70	0.1854

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Generation	2	235.0319944	117.5159972	1.70	0.1854

Appendix 32: One-way ANOVA test results for  $H_{5,1}$  for Czechia, done on SAS Studio.

**Wilcoxon Two-Sample Test**

Statistic	Z	Pr > Z	Pr >  Z	t Approximation	
				Pr > Z	Pr >  Z
58882.00	4.8606	<.0001	<.0001	<.0001	<.0001

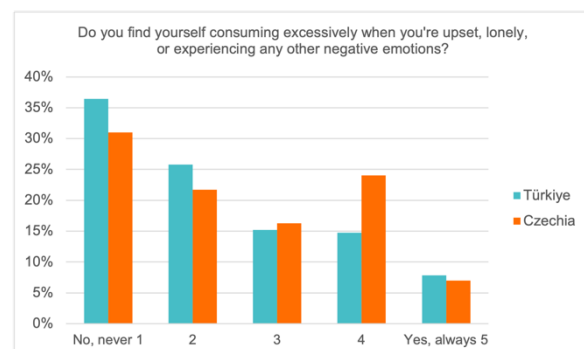
**Kruskal-Wallis Test**

Chi-Square	DF	Pr > ChiSq
23.6250	1	<.0001

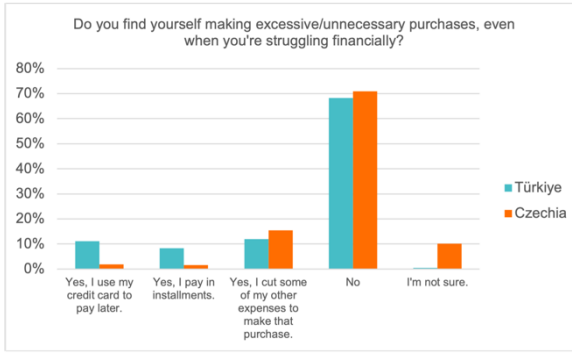
Appendix 33: Wilcoxon Rank Sum test results for  $H_{5,2}$ , done on SAS Studio.



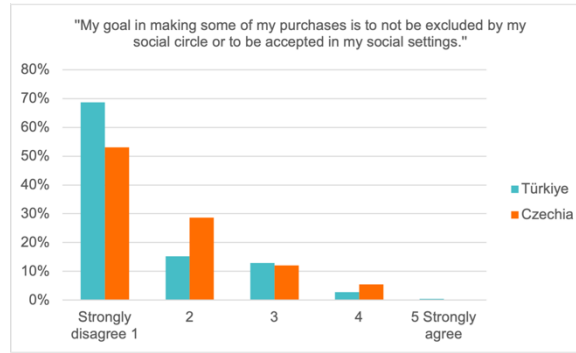
Appendix 34: Answers to question 8.



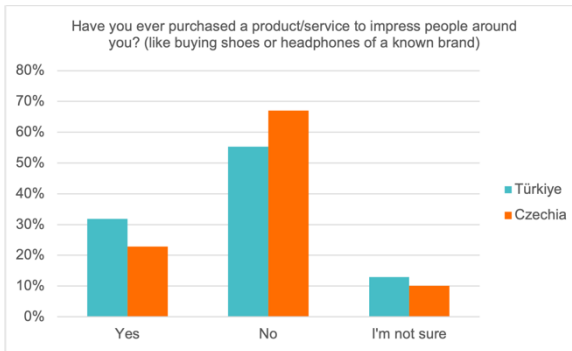
Appendix 35: Answers to question 12.



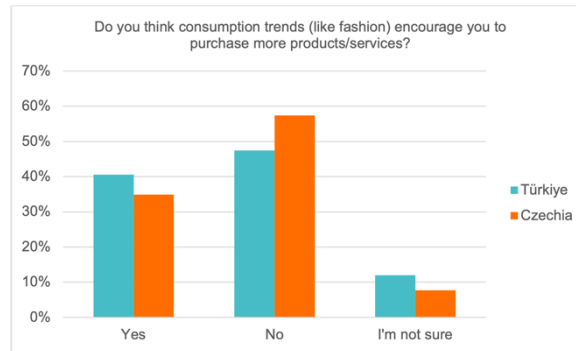
Appendix 36: Answers to question 13.



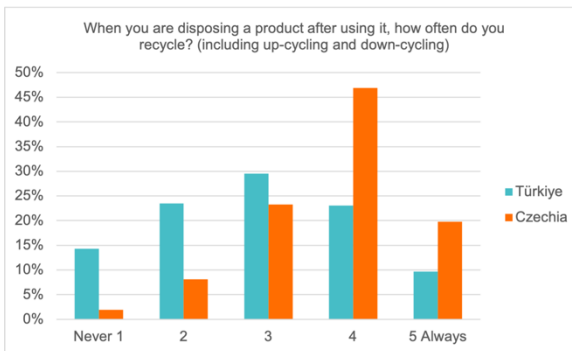
Appendix 37: Answers to question 15.



Appendix 38: Answers to question 16.



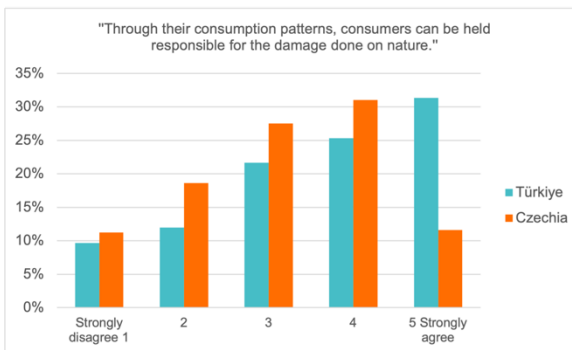
Appendix 39: Answers to question 17.



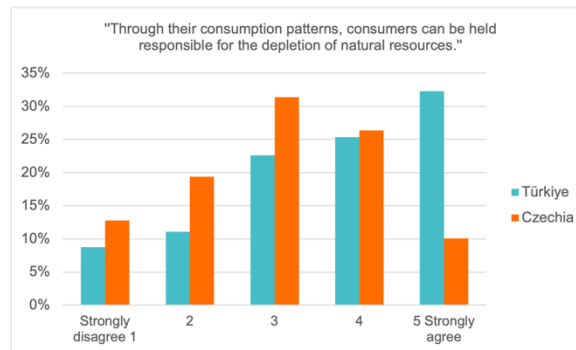
Appendix 40: Answers to question 21.



Appendix 41: Answers to question 22.



Appendix 42: Answers to question 23.



Appendix 43: Answers to question 24.



## Appendix 34:

### Sustainable, Conscious Consumer Behavior Questionnaire

Dear respondents,

This questionnaire aims to achieve specific research objectives related to consumer behavior for my bachelor's thesis.

The responses submitted will remain anonymous, and will only be published in the aforementioned thesis, in forms of qualitative data.

Thank you for participating!

Bashak Sarah Yoney

Czech University of Life Sciences

\*\*In case of feedback, further comments, or response withdrawal, you can contact me on [xyonb001@studenti.czu.cz](mailto:xyonb001@studenti.czu.cz).

#### Questions:

Please choose a language.

Lütfen bir dil seçiniz.

- English
- Türkçe (Türkiye'de yaşıyorum)

1. What is your age?
  - 18 to 25
  - 26 to 35
  - 36 to 42
  - 43 to 58
2. What is your occupation? <sup>1</sup>
  - Student
  - Employee
  - Self-employed
  - Retired
  - Unemployed
  - Other (please specify)
3. What is your highest level of education (in progress included)?
  - Primary school
  - Secondary school
  - High school
  - Vocational school
  - Bachelor's degree
  - Master's degree
  - Doctorate degree
4. Where do you live?
  - Czech Republic
  - Türkiye

1: Respondents can choose more than one option.

5. What is your average level of income? <sup>2, 3</sup>
  - Less than 17300 CZK/month
  - Between 17300 and 26422 CZK/month
  - Between 26423 and 39858 CZK/month
  - Between 39859 and 80849 CZK/month
  - More than 80849 CZK/month
6. In your day-to-day product/service purchases, which option plays the biggest role in your purchase decision? (Like shopping for groceries or basic clothing)
  - Price
  - Price to Quality ratio
  - Eco-friendliness or sustainable production
  - Advertisements, packaging or promotions
  - Referrals
  - Ingredients/contents
  - Practicality or compatibility with other items
  - Brand
7. When you intend to buy a product/service for long-term use, which option plays the biggest role in your purchase decision? (Like shopping for winter boots, vehicles, or major appliances such as fridges or washing machines)
  - Price
  - Price to Quality ratio
  - Eco-friendliness or sustainable production
  - Advertisements, packaging or promotions
  - Referrals
  - Ingredients/contents
  - Practicality or compatibility with other items
  - Brand
8. How often do you purchase eco-friendly or sustainably made products/services? <sup>4</sup>
  - 1: Never
  - 2
  - 3
  - 4
  - 5: Always
9. To what extent do you think your level of income affects your spendings? <sup>4</sup>
  - 1: Not at all
  - 2
  - 3
  - 4
  - 5: My spendings are completely based on my level of income

2: Version for Turkish respondents:

What is your average level of income?

- Less than 8500 TRY/month
- Between 8500 and 15500 TRY/month
- Between 15501 and 27250 TRY/month
- Between 27251 and 50000 TRY/month
- More than 50000 TRY/month

3: Question not mandatory to respond.

4: Likert scale question

10. If your income was 1.5 times higher, how would your spending habits change? <sup>1</sup>
- I would purchase more products/services.
  - I would purchase products/services with better quality or features.
  - I would purchase eco-friendly or sustainably made products/services more often.
  - My spending habits wouldn't change.
11. Do you think you own more items than you need?
- Yes
  - No
  - I'm not sure
12. Do you find yourself consuming excessively when you're upset, lonely, or experiencing any other negative emotions?<sup>4</sup>
- 1: No, never
  - 2
  - 3
  - 4
  - 5: Yes, always
13. Do you find yourself making excessive/unnecessary purchases, even when you're struggling financially?
- Yes, I use my credit card to pay later.
  - Yes, I pay in installments.
  - Yes, I cut some of my other expenses to make that purchase.
  - No.
  - I'm not sure.
14. "Seeing I haven't reached my credit card limit towards the end of the month encourages me to consume more." <sup>4</sup>
- 1: Never
  - 2
  - 3
  - 4
  - 5: Every month
15. "My goal in making some of my purchases is to not be excluded by my social circle or to be accepted in my social settings." <sup>4</sup>
- 1: Strongly disagree
  - 2
  - 3
  - 4
  - 5: Strongly agree
16. Have you ever purchased a product/service to impress people around you? (Like buying shoes or headphones of a known brand)
- Yes
  - No
  - I'm not sure

1: Respondents can choose more than one option.

4: Likert scale question

17. Do you think consumption trends (like fashion) encourage you to purchase more products/services?
- Yes
  - No
  - I'm not sure
18. Do you think social media affects your consumption habits?
- Yes, in a good way
  - Yes, in a bad way
  - No
  - I'm not sure
19. Do you think social media encourages you to purchase more products/services?
- Yes
  - No
  - I'm not sure
20. Do you think there are enough incentives for recycling where you live? (Like the accessibility of recycling bins, and the frequency of materials such as plastic and paper being collected by municipalities)
- Yes
  - Can be improved
  - No
  - I'm not sure
21. When you are disposing a product after using it, how often do you recycle? (Including up-cycling and down-cycling)<sup>4</sup>
- 1: Never
  - 2
  - 3
  - 4
  - 5: Always
22. When you are disposing a product after using it, how likely are you to reuse or give the product to someone else who will use it? (Like using tote bags/backpacks instead of purchasing paper/plastic shopping bags)<sup>4</sup>
- 1: Not at all likely
  - 2
  - 3
  - 4
  - 5: Very likely
23. "Through their consumption patterns, consumers can be held responsible for the damage done on nature."<sup>4</sup>
- 1: Strongly disagree
  - 2
  - 3
  - 4
  - 5: Strongly agree

4: Likert scale question

24. "Through their consumption patterns, consumers can be held responsible for the depletion of natural resources." <sup>4</sup>

- 1: Strongly disagree
- 2
- 3
- 4
- 5: Strongly agree

4: Likert scale question