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Roses Are Red, Taxes Are Pink: Unveiling the Perception and Economic Impact of the Pink Tax in the Netherlands

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Chapter 1: Introduction

1.1 Introduction

With the advent of Generation Z into our society, we have been made acutely aware of the injustices every marginalised group faces daily. From racism to sexism, the young adults of today are not hesitant to expose the issues and pursue them until they are addressed and resolved. One such topic that our generation is quite passionate about is gender-based discrimination. These could be of any kind (social, cultural, economic, etc.). The gender pay gap is one such topic which refers to the difference in median earnings between men and women over a lifetime (OECD, 2023). Some of the major benefits of studying the gender pay gap are the new insights we gained from it; not only are women on average paid less than men for comparable work, but also, once women enter a particular sector of the workforce, the median income of that sector reduces (England et al., 2021). The societal bias that undervalues women's contributions now stands exposed, and resultantly, deeper hidden forms of gender-based discrimination are being unearthed.

The term “pink tax” describes a gender tax; a markup on goods or services marketed towards women (Feingold, 2022). This form of discrimination is quite fascinating as there are no material differences in the products being marketed. Usually, only the colour of the product or packaging is changed. The New York City Department for Consumer Affairs concluded that women tend to pay on average 13% more than men for similar personal care items (Bessendorf, 2015). These differences accumulate over time far quicker than the average consumer might realise. This issue is not a recent discovery and goes as far back as 1995 when the California Senate passed the Gender Tax Repeal Act of 1995 (AB1100). Over 25 years ago, this act stated that “adult women effectively pay a gender tax which costs each woman approximately \$1,351 annually” (Speier, 1994). Hence based on the aforementioned, not only do women make lower earnings for similar work, but they also pay more than men for similar products. The majority of research conducted on this topic and mentioned herein has been based outside Europe; hence the prime driver for this study to be done in the Netherlands.

1.2 Research Objectives

The objective of this research is to gain insight into the perception and impact of the pink tax on adults between the ages of 18 and 30 in the Netherlands, with a specific focus on personal care/hygiene items. This research aims to understand the prevalence of perception and

knowledge regarding the pink tax within the age group of college-attending individuals could lead to further important insights. The study aims to examine the decision-making process at grocery stores, specifically whether participants intentionally choose products marketed toward men over those marketed toward women, knowing the pink tax they would pay otherwise. Additionally, the study seeks to assess the statistical significance of the impact of this tax within the specified age range of 18 to 30. The findings may shed light on potential financial stress experienced by female students and women entering the workforce, which could impact their educational pursuits and financial independence in the early stages of their careers.

The aforementioned reasons are why this study is being conducted in the Netherlands, in the post-COVID pandemic world of 2023, with a focus on college-aged individuals. This cohort of young individuals has been the most socially aware in comparison to their predecessors. It would be intriguing to see how different aspects of one's identity might lead to a different perception of the pink tax. For instance, whether different gender or cultural identities' perceptions of the pink tax have a statistically significant impact on consumer behaviour, what these perceptions are population-wide, and the economic consequences on the subset of individuals studied. These points of interest are highlighted via the theoretical and empirical sub-questions, which all directly help answer the central research question.

1.3 Research Central Question

To address the objectives mentioned, the following central research question was formulated: To what extent do Dutch consumers perceive the concept of the pink tax, and how does this perception impact their choices in purchasing personal care items?

1.4 Sub-questions

A thorough analysis of the central research question can be achieved with a series of smaller investigations, separated below for convenience.

Theoretical Sub-questions:

1. To what extent does gender identity influence the perception of the pink tax and subsequent consumer behaviour?
2. Are there any significant differences in perception of the pink tax between nationalities/cultures?

Empirical Sub-questions:

3. What is the level of awareness of the pink tax among consumers in the Netherlands?
4. What are the behavioural patterns exhibited by consumers who are aware of the pink tax, and how do these patterns differ from those who are not aware?
5. What are the economic consequences of the pink tax on consumer spending on personal care items between gender identities?

Research sub-question one: *To what extent does gender identity influence the perception of the pink tax and subsequent consumer behaviour?*

This section will aim to discern whether there are any statistically significant differences in how aware consumers are about the pink tax based on their gender identities. The options available about gender identities for the survey will be the following: male, female, non-binary, and other.

Research sub-question two: *Are there any significant differences in perception of the pink tax between nationalities/cultures?*

Given that the survey has a sufficient number of Dutch and International respondents, it would be fascinating to determine whether these two groups are aware of this tax at different levels. This does highlight some limitations, given that the subset of internationals that study abroad is largely from highly educated and wealthy families in comparison to Dutch students who have much lower tuition, which may lead to a more varied respondent pool.

Research sub-question three: *What is the level of awareness of the pink tax among consumers in the Netherlands?*

This question aims to generally determine how much the average college-aged consumer is aware of the pink tax and its impact.

Research sub-question four: *What are the behavioural patterns exhibited by consumers who are aware of the pink tax, and how do these patterns differ from those who are not aware?*

This part of the analysis will focus on whether those who are more aware of the pink tax do tend to factor in this knowledge in their decision-making. For example, if women from an international background tend to be more aware of the pink tax, do they use this knowledge to make more frugal choices at the grocery store?

Research sub-question five: *What are the economic consequences of the pink tax on consumer spending between gender identities?*

By asking the average monthly spending consumers have on their personal care items as well as presenting them with choices in the survey itself, it will be possible to determine whether men and women have any statistically significant differences in spending due to a pink tax. It is also important to mention here that in a grocery store, the choices will be between twenty to thirty products. The survey used will occur between two products, which is much simpler and hence may not be highly ecologically valid on its own.

1.5 Structure of the Thesis

The study conducted in this thesis is presented in five chapters: Introduction, Literature Review, Research Design and Methodology, Results, and Conclusion. Further details are explained below.

The first two chapters function as investigating the theoretical questions as well as providing more background information and context to our inspection. Chapter One starts with a broad introduction to the pink tax and its prevalence in today's society. It continues to clarify the research objectives that are to be achieved with the analysis to be conducted in this paper. Further, it explores the problem at hand with a central research question along with five sub-questions. Lastly, it mentions the thesis structure followed for ease of readability. Further, Chapter Two includes a literature review of prior investigations on the pink tax's perceptions by consumers as well as its impact on consumers. The research papers mentioned vary in sector as well as population. This section concludes with a theoretical and conceptual framework which guides the rest of the exploration.

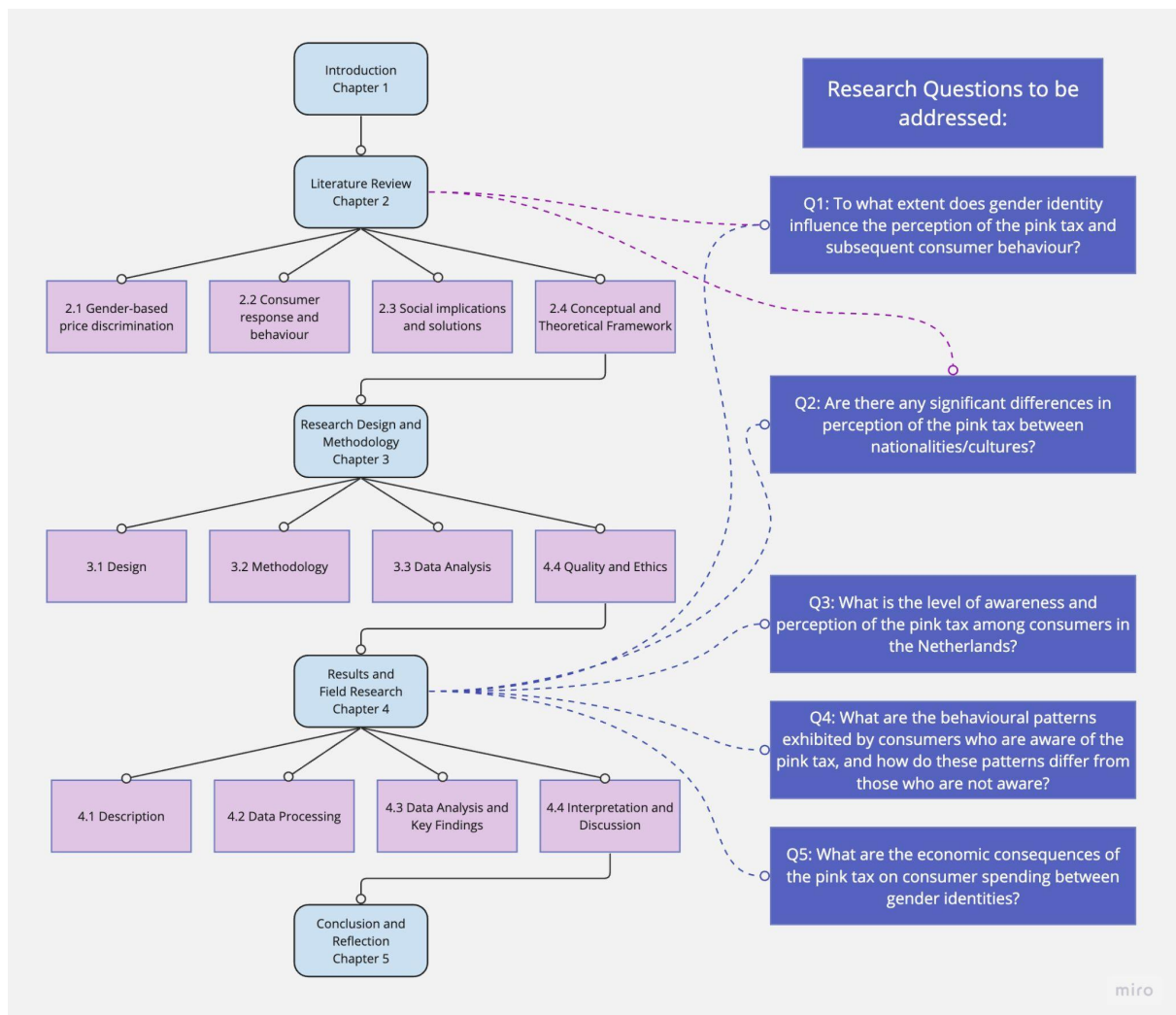
The following three chapters examine methods used with the field data collected and general results for the central research question as well as sub-questions. Chapter Three focuses on the design as well as the methodology used in the field research. The methodology will focus on the survey dispersed and the justification of choices made. It will explore the specific analyses that are applied to the raw data collected, and why these are utilised. Hence, the limitations of the methods used will also be present. The following chapter (Four) will exhibit the processing, inspection, and interpretation of results. There will be a description of the respondents, as well as an in-depth discussion of the general conclusions of the collected

data. Chapter Five includes a conclusion of the knowledge received to provide recommendations for future research and closing remarks.

A visual representation of the thesis structure is included below in Figure 1.1 for convenience.

Figure 1.1

Visual representation of thesis structure including where the research questions are addressed



Chapter 2: Literature Review

The literature review section of this thesis provides a comprehensive analysis of existing research studies and reports that explore the phenomenon of the pink tax. This section aims to address the theoretical sub-questions outlined earlier and shed light on the factors that influenced the development of the survey used for data collection. Section 1 focuses on gaining context for the thesis, Section 2 on the first theoretical question, Section 3 on the second theoretical question, and finally the fourth on the theoretical and conceptual frameworks.

The literature review begins by delving into research studies that have investigated the price differences for items based on gender (Section 1). By analysing these studies, the areas of research were decided for this thesis. The following section (Section 2) looks into consumer behaviour and perception, which mainly focuses on informing the first theoretical question: To what extent does gender identity influence the perception of the pink tax and subsequent consumer behaviour? Furthermore, in Section 3 we examine a report from the Organization for Economic Cooperation and Development (OECD) that explored the level of gender equity in the taxation system in the section titled ‘Social implications and solutions’. By understanding cross-cultural variations in the treatment of gender inequity in taxation systems, we can gain a more nuanced understanding of how these countries would react to the issue of a pink tax if it was prevalent in their country. In this section, we also review a study that illuminates the urgency of this issue and how it must be solved, which will inform our suggestions in the Conclusion.

The last section (Section 4) will discuss the theoretical and conceptual frameworks that have influenced the development of the survey instrument and more largely, this study. By integrating all these insights, we can contribute to the existing knowledge on the pink tax and provide meaningful implications for policy and practice in a way that has not been done before, increasing its scientific relevance.

2.1 Gender-based Price Discrimination

The study by Guittar et al. (2021) tackles the pervasiveness of gender-based pricing differentiation of personal care products. Their findings suggest that this practice is not found across products or consistently punitive towards women. In fact, there were also products that men tend to pay more for (such as shaving creams) alongside products that women tend to

pay more for (deodorants and lotions). They conclude by identifying a dangerous pattern that is overlooked. The burgeoning of gender pricing is based on the thought process that genders should be treated inequitably and reinforces the gender structures already in place. This can further expand this form of harmful thinking, leading to gender-based differences in buying necessities such as personal care items. This study advised the researcher to pick a more gender-neutral product such as a razor within the survey used, which is widely used by men and women. In addition, it casts a light on the possibility that the pink tax might not be that prevalent, leading to much less charged language in the survey employed (see Appendix A).

The following study is a master thesis on the pink tax in the Swedish market for personal hygiene products conducted by Matilda Kardetoft (2022). In this thesis, she was not able to decisively state that there is a strong presence of the pink tax in the market she was analysing. She did confidently state that “prices are not statistically equal in all areas between the genders”, coming to a similar conclusion as Guittar et al. as mentioned previously (Kardetoft, 2022, pp 28). This similarly informed the research and survey conducted in this thesis.

2.2 Consumer Response and Behaviour

Bello titled her master thesis, ‘How Do Female and Male Consumers Respond to a “Pink Tax”?’ (Bello, 2021, pp 1). In it, she analyses the perception of fairness when a pink tax is presented, and whether gender has a statistically significant impact on that. Her results reveal that the independent variable Gender is marginally significant in determining the magnitude of fairness perception. When the product had a pink tax applied, the price fairness perception of men and women decreased, but the effect was stronger in women than in men. This directly answers a part of the first theoretical question investigating whether different gender identities perceive the pink tax differently.

The next publication also looked into expectations and attitudes towards gender-based price discrimination. Ferrell et al. (2016) conducted two studies in which they concluded the differences between the genders concerning this topic. The results of the first study concluded that men expected gendered pricing more than women. It is important to mention that this was not related to personal care products, but prices at a hair salon and dry cleaning services. Although these services are not related to this study, they can still speak to the outlook of men and women about this pricing practice. The second was qualitative and stated that women tend to view gender-based pricing as more unfair. This results in an important insight: even if

men tended to expect the pink tax, they find it less unfair than women do. This is a very generalised statement for such a specific study in a different context, but it does help to add context to the first theoretical question. This result also led to there being different types of questions in the survey measuring fairness, from Bello (2021), as well as some questions measuring expectations/recognition of the pink tax as done by Ferrell et al.

Stevens and Shanahan (2017) wrote a paper on understanding why women pay a pink tax on the products they consume. Although the main point of the publication was irrelevant to this paper, they did have fascinating results about consumer behaviour. They wrote that women tend to have the intention to compare equivalent products across companies and genders prior to purchase when they do identify the pink tax. They find a “negative emotional response consequence” beyond simply taking a negative action towards the company by avoiding their products (Stevens & Shanahan, 2017, Discussion and Conclusion para 5). This speaks to how consumer behaviour may be changed after the identification of the pink tax, which further expands on the second half of the first theoretical question.

2.3 Social Implications and Solutions

The second theoretical question inquires into whether there are any differences in the perception of the pink tax between nationalities/cultures. There does not seem to be any existing publication comparing the perception of the pink tax between regions, although a different topic’s report was found that could provide some clarity. The OECD report titled “Tax Policy and Gender Equality: A Stocktake of Country Approaches” is the first and perhaps only cross-country report on how a country approaches its policies related to tax and how much they include gender outcomes in these aforementioned policies (OECD Publishing, 2022). They analyse both explicit and implicit biases in policy, including defining them, and whether there are any policies aimed at improving gender equity nationally. Although taxes are not related to the pink tax, the national approach to such a topic can greatly inform how that nation may feel and react to gender-based pricing discrimination. In this report, they specify whether different nations do indeed behave differently, which does address the second theoretical question. Within this publication, Figures 2, 3, and 4 as well as Table 1 clearly show that there is no universal approach to gender inequity related to tax policy which suggests that there may be statistically significant differences in perception of the pink tax across countries/cultures.

The final publication is a review article written by Abdou and El Ayoubi (2020) and in it, they examine the pink tax on commodities sold in New York, USA. They found vast levels of gender-based pricing throughout different product categories. They write that, “the perseverance of the pink tax stresses that we must come up with a solution to this critical problem. Similarly, the malicious diligence of the gender pay gap, which has extended effects on a woman’s life, demands a judicial solution” (Abdou & El Ayoubi, 2020, pp 38). Their charged words indicate the level and proliferation of the pink tax in New York, and how desperately a solution written into law is required. This study can help in suggesting solutions based on how the pink tax is perceived and how it changes consumer behaviour in the sample this thesis investigates.

2.4 Theoretical and Conceptual Frameworks

The theoretical framework will provide explanations and predictions based on established knowledge of the pink tax and the relationships we are investigating, while the conceptual framework provides a general roadmap for conducting the study as a whole. We will first start with the theoretical which lays the foundation for understanding the underlying concepts and theories that inform the exploration of the pink tax phenomenon. It provides a structured lens through which we can analyse and interpret the perception of the pink tax and the resulting consumer behaviour it causes.

Table 2.4

Theoretical framework

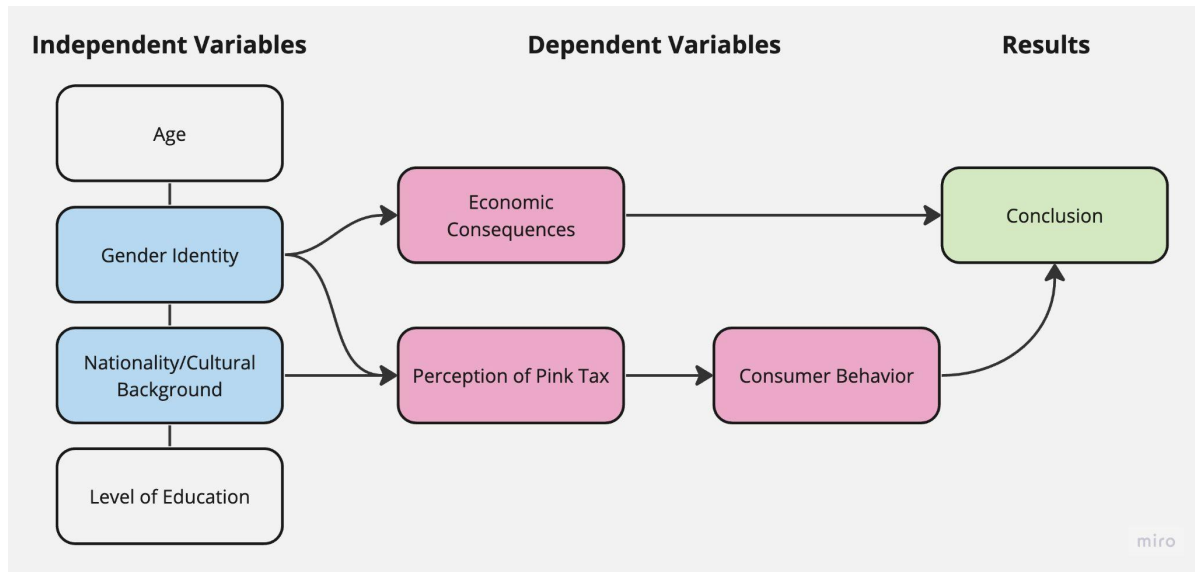
Topic	Issue addressed	Findings
Gender-based price discrimination	The survey	Both Guittar et al. (2021) and Kardetoft (2022) concluded that there were products in the personal care industry that women paid more for and also products that men paid more for. These results bring an opposing perspective to this research leading to less charged language in the survey, making certain to not imply the presence of the pink tax while asking questions.
Consumer response and behaviour	Theoretical question 1: To what extent does gender identity influence the perception of the pink tax	Bello (2021) concluded that when the pink tax was presented, both men and women perceived it as less fair. Although, women had a stronger

	<p>and subsequent consumer behaviour?</p>	<p>negative perception than men. Ferrell et al. (2016) found that men expected the pink tax more often but women found it more unfair than men did. Finally, Stevens and Shanahan (2017) found that women are more likely to seek alternative options if they do identify a pink tax at play.</p> <p>This directly answers the question, there is indeed an impact of gender identity upon the perception and subsequent consumer behaviour.</p>
<p>Social implications and solutions</p>	<p>Theoretical question 2: Are there any significant differences in perception of the pink tax between nationalities/cultures?</p> <p>Conclusions</p>	<p>Although there seemed to be no studies conducted on this topic, an OECD report was used to gauge how countries might respond to the pink tax and whether this would differ between regions (OECD Publishing, 2022). The tax policy report clearly showed that countries had drastically different approaches to tax policy when considering gender inequality, and this helps to elucidate that perception of the pink tax might also differ drastically. This addresses theoretical question two, which will be further explored in later sections of this paper through analysis of the collected survey data.</p> <p>Lastly, Abdou and El Ayoubi (2020) found widespread evidence of the pink tax in New York and demanded immediate judicial solutions to this problem. Their suggestions and findings could be helpful in comparison while writing the conclusion of this thesis.</p>

The conceptual framework for this study provides a structured overview of the key variables and their interrelationships, aiming to guide the investigation into the economic impact and perception of the pink tax. By visualising the conceptual framework, we can gain a deeper understanding of the factors that influence awareness, perception, consumer behaviour, and economic consequences related to gender-based pricing.

Figure 2.4

Conceptual framework



To safeguard the validity of this study, the conceptual framework will be instrumental in guiding both the data gathering and analysis processes. By incorporating age, gender identity, nationality, and level of education as independent variables, we aim to capture diverse perspectives and experiences relevant to the pink tax. This approach will allow us to examine how these factors influence awareness, perception, and consumer behaviour related to gender-based pricing. Our comprehensive survey will be designed and aligned with the framework's variables to ensure the collection of relevant and targeted data that accurately represents the population of interest.

In the data analysis phase, the conceptual framework will serve as a roadmap, aiding in the systematic categorization and interpretation of responses. By organising data based on the identified key variables and their interrelationships, potential patterns, and correlations can be identified within the data, contributing to the study's robustness. The explicit identification of dependent variables as economic consequences, perception of the pink tax, and consumer behaviour will maintain focus on the core aspects of the study, reducing the risk of deviation from research objectives. Overall, the integration of the conceptual framework into data gathering and analysis will enhance the study's validity, providing a structured approach to explore the economic impact and perception of the pink tax among different demographic groups.

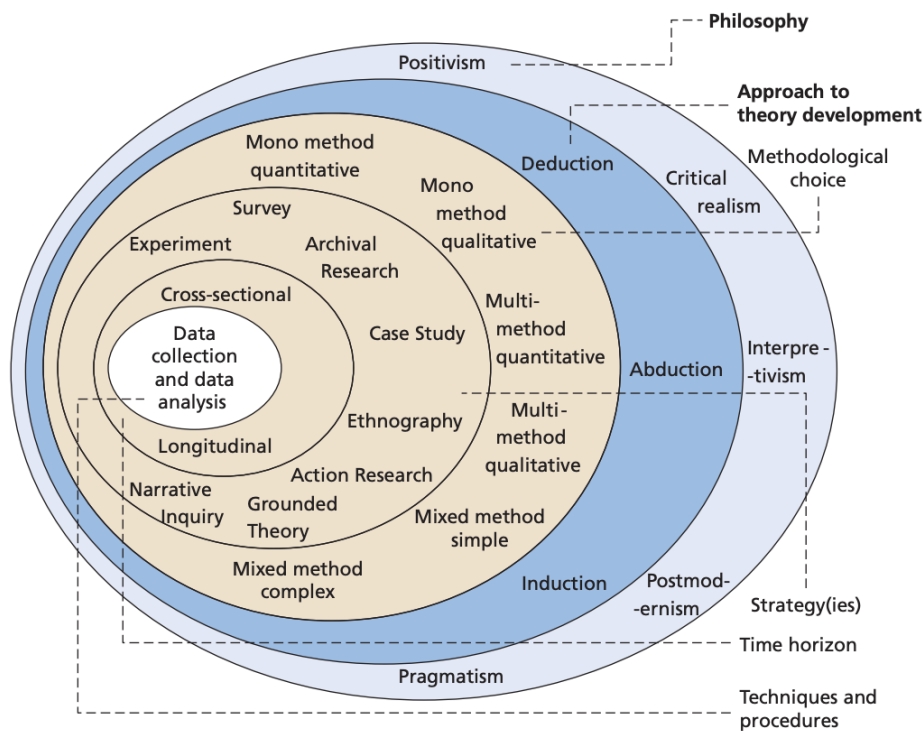
Chapter 3: Research Design and Methodology

3.1 Design

The research onion by Saunders et al. (2019) provides a systematic framework for conducting research, starting from the outer layer of research philosophy and moving inward to the core of data collection and analysis. There are a few layers within this, and we will be moving through them from the outside to the core. Provided below is a figure that depicts Saunders' onion.

Figure 3.1

The Research Onion by Saunders et al



Notes. This was extracted from Saunders' (2019) Chapter 4 which discussed research philosophy and the accompanying theory.

At the outer layer of the research onion is the research philosophy. This refers to how you believe knowledge is gathered and developed (Saunders et al., 2019). This research can be considered positivist, aiming to gather empirical evidence to answer specific research questions. The research is based on the assumption that knowledge can be acquired through objective observations and measurements. Since the topic is about the perception and impact

of the pink tax, the researcher assumes that these changes can indeed be measured quantitatively.

Moving inward, the next few layers of the research onion is the research approach, which includes the research strategy, time horizon, and the nature of data. In this thesis, the research strategy involves conducting a survey and literature review. The survey will serve as the primary data collection method to gather information on the perception and impact of the pink tax in the Netherlands among adults aged 18 to 30, with a specific focus on personal care items (razors). The literature review, on the other hand, will provide a comprehensive analysis of prior research on the pink tax's perception and its impact on consumers. The research design can be experimental, descriptive, exploratory, or a combination of these. This design incorporates elements of both descriptive and exploratory research designs. Descriptive research aims to provide an accurate description of a phenomenon or situation. By examining the level of awareness and perception of the pink tax among consumers, as well as the behavioural patterns exhibited by those who are aware, this paper seeks to describe the current state of knowledge and behaviour regarding the pink tax. Exploratory research, on the other hand, aims to explore a topic in-depth, generate insights, and identify potential relationships or patterns.

This research also poses research sub-questions that explore the influence of gender identity and nationality/culture on the perception of the pink tax, as well as the economic consequences of the tax on consumer spending. These sub-questions highlight an exploratory component where the researcher is seeking to uncover new insights and understand the potential factors that may impact consumer behaviour and perception related to the pink tax amongst the sample chosen. Thus, this thesis incorporates a mixed research design that combines elements of descriptive and exploratory research. The time horizon of the research is cross-sectional. These types of studies collect data at a specific point in time from a sample or population. Surveys involve administering questionnaires or structured interviews to gather data from respondents. The focus is on gathering information from a diverse group of participants (different genders, cultures/nationalities, and ages in this case) simultaneously rather than following them over an extended period. The nature of data can be quantitative, qualitative, or mixed methods.

Moving further inward, the next layer of the research onion is the research strategy, which includes the research methods, sample selection, and data collection procedures. In this thesis, the primary research method is a survey, which will be administered to college-aged individuals in the Netherlands. The sample selection will target adults aged 18 to 30, with a focus on their decision-making process at grocery stores regarding personal care items. The survey will gather data on awareness, perception, and consumer behaviour related to the pink tax. Additionally, the research aims to assess the economic consequences of the pink tax on consumer spending between different gender identities.

The core of the research onion is data analysis and interpretation. In this thesis, the collected survey data will be analysed using specific statistical techniques such as descriptive statistics as well as the independent samples t-test/Analysis of Variance (ANOVA) analysis. Descriptive statistics such as frequencies, percentages, mean, and standard deviation will be used to summarise the characteristics of the participant sample. The independent samples t-test and ANOVA are both statistical tests that can be used to analyse and compare means between different groups. In this thesis, there are different groups and conditions (e.g., control and experiment groups, male/female, different cultures) and we seek to compare their responses on certain variables (perception about the pink tax). In this case, we can consider using either the independent samples t-test or ANOVA, depending on the number of groups (two or more, respectively). These will be preceded by the appropriate test to ensure that all the assumptions are met. As this paper is looking for differences in perception between the groups aforementioned, these tests seem to be a good fit.

Overall, the research onion framework by Saunders et al. (2019) provides a systematic approach to guide the research process for this thesis. It encompasses the philosophical underpinnings, research approaches, choices, and data analysis techniques necessary to address the research objectives and answer the research questions.

Table 3.1

Research strategies used within this thesis paper

Research Questions	Research Strategy	Method	Data gathering instrument	Data analysis results
RQ1-5	Empirical	Survey	Online	Tables, Models,

			independent questionnaire	Charts
RQ1-2	Theoretical	Literature Review	Published papers, academically reliable articles	Written review/narrative
Central Research Question	Combination	Analysis	Mix of the two above	Combination

3.2 Methodology

Below, there is a table which explains the survey questions along with which sub-question they link to. The full survey with answer options is made available in Appendix A.

Table 3.2

Questions in the survey linked to respective sub-questions of the central research question along with the reasoning

Research Question Addressed/Purpose	Question on the Survey	Reasoning
Basic personal information, multiple choice questions	Gender identity, Age, Nationality/Cultural background, Level of education	By having these categories, one can separate the answers between these groups and hence be able to answer questions discerning whether certain statistically significant differences exist. The level of education will give an insight into how many participants are indeed college-going students, and whether the subset of the population targeted has been reached.
RQ1,2,3,4	On a scale of 1-5, how aware are you of price differences for personal care items based on gender? How often have you noticed price differences in personal care items (such as razors) solely based on gender-based	Both of these aim to pinpoint the level of awareness the participants have with regard to price differences. They can be analysed in conjunction with the previous set of questions to answer the research questions mentioned.

	marketing? {scale of 1-4}	
RQ1,4	<p>Have you ever actively searched for personal care items that are priced equally regardless of gender? {yes, no}</p> <p>Have you ever avoided purchasing a personal care item due to perceived gender-based pricing? {yes, no}</p>	These two questions target specifically the consumer behaviour of participants as a result of gender-based pricing practices. They can be analysed in conjunction with the basic information section to answer the two research questions mentioned.
RQ1,2,3,4	<p>{Likert scale with agreement level}</p> <p>I have a proficient understanding of the pink tax.</p> <p>I am knowledgeable of the pink tax.</p> <p>I am concerned about the pink tax affecting my purchasing decisions</p> <p>I think that my cultural identity affects my perception of the pink tax</p>	These questions look at the perception of the pink tax and how well participants think that they understand the concept. This, along with other questions that look at their consumer behaviour, can give us insights on RQs 1, 2, 3, and 4.
RQ2	<p>Do you believe the pink tax is more prevalent in certain cultures or countries?</p> <p>Have you noticed a difference in the prevalence of the pink tax between different countries?</p>	These questions specifically target the second research question regarding the perception and prevalence of pink taxes across different cultures or countries.
RQ4	If you are aware of the pink tax, have you changed your shopping habits in response to it?	This question directly asks respondents whether they think they changed their shopping habits in response to the pink tax. We can compare this with their answers to other questions to determine whether what they think is consistent with their other responses.
RQ5	On average, how much more are you willing to pay for a personal care item if it is marketed towards your gender?	These questions target the economic consequences of the pink tax, including how much more (in a %) people are willing

	<p>(Percentage increase)</p> <p>How much do you spend on personal care items per month? (Specify amount in Euros; personal care items include any product you apply externally for hygiene/scent purposes)</p> <p>How much of an impact do you think the pink tax has on your overall personal care item expenses?</p>	<p>to pay for products marketed towards their gender, how much they spend (which allows us to compare the amount spent between men and women), and how much of an impact respondents think that the pink tax has on their overall personal care item expenses.</p>
Random assignment	Pick a character to continue	<p>By asking participants to randomly pick a character between 2, each person has a 50% chance of being in the control or treatment group (to come in the following question), effectively creating random assignment within the survey.</p>
RQ4	<p>Suppose you are shopping for a specific personal care item, such as a razor, and you come across the following two options. Pick the one you would choose:</p> <p>Scenario 1 has the same prices, Scenario 2 has the women's razor priced approximately 20% higher.</p>	<p>This allows us to look at how consumers would pick between two otherwise identical razors. The ones in the second scenario would allow us to determine whether customers in actuality would be willing to pay 20% more simply for a packaging difference.</p>
Manipulation Check	Which product had a higher price?	<p>This question is simply to check whether the respondent indeed was paying attention and answered truthfully versus blindly. Those who fail this manipulation check will be removed from the study.</p>
RQ3,4	<p>{Likert Scale}</p> <p>I think the prizes are reasonable</p> <p>I think the prices are justified</p> <p>I think the prices are acceptable</p>	<p>These questions allow us to get an insight into the perception of the choice presented, whether they think that equally priced items are fair or whether they think that gender-based priced items are fair.</p>

	<p>I think the prices are unreasonable</p> <p>I think the prices are unfair</p> <p>I think the prices are unacceptable</p>	
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3.3 Data Analysis

For the basic personal information multiple-choice questions, one can calculate frequencies and percentages for each category to describe the demographic characteristics of your participants. This would allow us to understand the sample we have collected. For RQ3, we can present a line graph with percentages over the awareness level. This would give an overview as to the level of awareness of all of our respondents, answering the question.

Further, one can compare high and low awareness participants' consumer behaviour when confronted with the pink tax through an Independent samples t-test (RQ4). This compares the means of a measure over two independent samples, indicating if there is a statistically significant difference between them. Scenario 1 has the same priced razors and Scenario 2 has the pink tax of approximately 30% applied. If the differences between the high- and low-awareness groups are statistically significant, then it means that there is a correlation between awareness level and consumer behaviour. The same test (Independent samples t-test) can be used to compare the economic impact of the pink tax between the gender identities (RQ5).

Likert scale questions were used to indicate participants' perceptions. We could create composites measuring fairness and then proceed to compare the means of Likert scale responses between genders via an Independent samples t-test (RQ1).

To analyse the question regarding participants' choice between two scenarios, one can use the following approach which includes descriptive analysis and the chi-square test of independence. This can be used to determine if there is a significant association between participants' gender identity and the choices they make when they are and are not faced with the pink tax (RQ1). The chi-square test will help one assess whether the observed differences

in choices between the two scenarios are statistically significant. In this section, there will be two hypotheses.

Null hypothesis (H0): There is no association between participants' choice and the gender identity they have.

Alternative hypothesis (HA): There is an association between participants' choice and the gender identity they have.

We would expect one of the following interpretations. If the chi-square test yields a significant p-value ($p < 0.05$), we will reject the null hypothesis and conclude that there is a significant association between participants' choice and their gender identity. If the p-value is not significant ($p \geq 0.05$), we fail to reject the null hypothesis, indicating that there is no significant association between participants' choice and their gender identity. This analysis will help us assess whether participants' choices differ when faced with the choice between two scenarios, one with the same price and the other with the pink tax applied,

Looking at RQ2, we can first calculate means and standard deviations of the respondents' thoughts on whether their culture impacts their perception of the pink tax. This helps us assess whether the participants themselves expect a big impact of culture on their perception or not. Further, we can conduct a one-way ANOVA test comparing respondents by their nationalities on how they perceive the choice between equally priced or gender-priced goods.

3.4 Quality and Ethics

Validity, reliability, and ethics are important considerations in research methods in such a thesis. Validity refers to the extent to which a research study accurately measures what it intends to measure. It ensures that the findings and conclusions drawn from the study are valid and trustworthy. One important form of validity is content validity. It is important to ensure that the survey questions adequately capture the constructs one aims to measure. To ensure that this is the case, there are multiple questions and question types addressing the same research question. The next form of validity to be explored is external validity. This aspect relates to the generalisability of the findings of this paper to a broader population. This will be addressed in the results section when the representativeness of the sample can be considered. This would be in terms of gender, age, nationality, and education to have a truly diverse sample. This is a concern as the expected respondent pool without processing is

assumed to be around 60-80, which might not be large enough to have the desired variety in all the aforementioned categories.

Reliability refers to the consistency and stability of one's research methods. It ensures that the results obtained from the survey can be replicated and are not influenced by random factors. One such possibility is the test-retest reliability. One can assess the stability of participants' responses by conducting a retest on a subsample of respondents after a certain time interval. Comparing their responses can help determine the reliability of this survey instrument. However, due to the time constraints of this thesis, it is not possible for this time gap to take place. The next form of reliability is internal consistency reliability. This survey has multiple Likert scale questions measuring the same construct (topic), hence one can assess the internal consistency using measures like Cronbach's alpha. Higher values mean greater reliability.

Ethical considerations are crucial in research to protect the rights and well-being of participants. Perhaps one of the most important considerations is informed consent. It is important to ensure that participants are fully informed about the purpose, procedures, and potential risks or benefits of participating in the study. This is why there is a disclaimer at the beginning of the survey where they clearly give their voluntary consent before the collection of any data. In addition, personal information is provided at the beginning and end of the survey where they can email the researcher and ask her any questions they may have regarding the research or results. This also makes sure that a debriefing can occur at the end of the study should they wish to have the results made available to them. The next consideration is confidentiality and anonymity. The participants should be assured that their responses will be kept confidential and that their identities will remain anonymous in reporting and publication. This is a certainty as no names or contact information is collected from the participants, so it is not a concern for this paper. The following consideration is data protection, ensuring that one has taken measures to secure the personal information collected during the study to prevent unauthorised access or disclosure. Again, as no personal information is collected and only the researcher is working on this paper, this is not of concern. There is also a point to ensure that the research methods do not cause any harm or distress, which is well taken care of with the neutral way in which questions are asked and the fact that they can exit at any point without a reason being given.

Chapter 4: Results and Field Research

In this chapter, the processing, analysis, and main findings of the data are presented. Firstly, a description of the collection of the data is presented. Further, an explanation of how and with which software the data was processed is provided. The next section will outline the analysis and the key findings from this analysis. Lastly, an interpretation and discussion of the analysis and the data is specified.

4.1 Description

The data covered in this section is qualitative and was collected through an online survey. The website “Qualtrics” was used as it contained higher levels of researcher manipulation and forms of analysis than other simpler competitors like Google Survey. The responses were completely anonymous, and only demographic questions were asked in the survey itself (see Appendix A for questions). The survey began with a consent declaration and if the users accepted, then they could proceed to the questions. The respondents could exit at any point, which made the process entirely optional. These safeguards ensured an ethical and methodological collection of data.

4.2 Data Processing

All the data processing was completed online on the platform called IBM SPSS Statistics 29. SPSS is a statistical software package that offers a range of data analysis and visualisation tools for researchers, analysts, and data scientists. It provides advanced statistical techniques and easy-to-use interfaces to assist in making data-driven decisions and drawing insights from complex datasets, hence why it is used in this study. The survey yielded 65 responses, 4 of which were incomplete and hence removed from the analysis. There were men, women, and non-binary individuals that filled out the survey. Women comprised 54.1% of respondents (33 respondents), men 42.6% (26 respondents), and non-binary individuals 3.3% (2 respondents). As 2 respondents were not enough to gain an understanding of the knowledge level and perception of non-binary individuals, these responses were also removed from the study. This takes the final set of responses to 59.

Depending on the objective being studied, there are different variables that were used to create categories. These variables include gender and nationality. Research sub-question four requires separating respondents into those who are aware and not aware, and analysing whether their consumer behaviour differs. For this, a new variable is created called

‘Awareness Composite’ which is the mean of the scale-based responses given for three questions assessing the awareness level of respondents. The first question in this composite is: On a scale of 1-5, how aware are you of price differences for personal care items based on gender? The next two questions are also Likert-scale based, with agreement level increasing as the number increases: I have a proficient understanding of the pink tax and I am knowledgeable of the pink tax. These three directly target the awareness/knowledge of the pink tax that respondents might have, and both have scales that are parallel to one another. This new variable will serve to answer RQ4 as mentioned earlier. Another variable was created to distinguish between participants who are overall aware and those who are not. The aforementioned composite score was used, with 3 and above indicating awareness (3 - moderate awareness, increasing with the number until the maximum of 5). This analysis was used in answering the fourth research sub-question, which looked at whether awareness changed consumer behaviour.

The final two composite variables were created to help with the first research sub-question which looked into whether gender identity has any impact on the perception and subsequent consumer behaviour of individuals. This was created with a composite of respectively the first and last three of the Likert scale questions questioning the fairness and unfairness of the price differences that immediately followed the two scenarios. The two scenarios included one with an equal price, and one with a pink tax of approximately 30% applied. The scenario that a participant responded to was decided based on random assignment; the respondent picked one of two characters, which gave each person a 50% likelihood of having a scenario. This resulted in two composite variables, one representing fairness and one unfairness. No further data processing was necessary prior to analysis for this study.

4.3 Data Analysis and Key Findings

Table 4.3.1 presented below provides basic descriptive data to understand the demographics of the respondents of the survey.

Table 4.3.1

Demographics of survey respondents

Demographic	Number	Percentage (%)
Gender		

Male	26	44.1%
Female	33	55.9%
Age		
18-20	12	20.3%
21-23	16	27.1%
24-26	13	22%
27-29	13	22%
30-32	4	6.8%
33-35	-	-
35+	1	1.7%
Nationality		
Dutch	26	44.1%
European	16	27.1%
Asian	6	10.2%
African	2	3.4%
North American	3	5.1%
South American	3	5.1%
Middle Eastern	3	5.1%
Education		
High School	-	-
Trade/Technical/etc.	2	3.4%
Bachelor's	34	57.6%
Master's	20	33.9%
Ph.D. or higher	3	5.1%

Notes. This table is created by conducting basic descriptive statistics related to frequencies on SPSS Statistics.

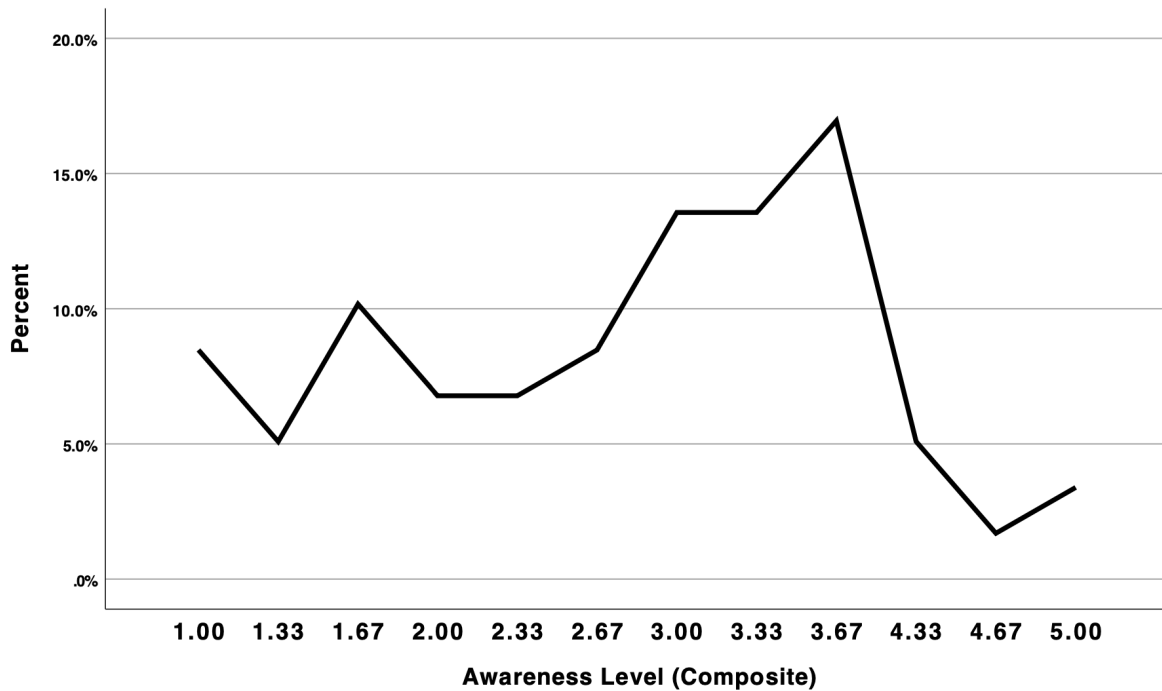
The analysis in Table 4.3.1 was done to confirm whether the key consumer group we were targeting (college-aged individuals) was reached and, whether there were enough men, women, and respondents of different nationalities to conduct statistical analysis on the respective separated samples. The vast majority (sum of 90%+) of our respondents are between the ages of 18 and 30, hence our target audience was safely reached. We also had all of our respondents attend some form of higher education, which again confirms our desired demographic. We do have 44.1% of men and 55.9% of women, which gives ample room for the behaviours of both genders to be discussed. Lastly, we did indeed have respondents from all the nationality categories we had created. However, most (81.4%) were Dutch, European, and Asian, and other categories only received two or three respondents. For the purpose of this research, we will perform the analysis on all of these with the acknowledgment that the African, Middle Eastern, North, and South American categories will possibly not accurately represent their respective larger populations.

4.3.1 Analysis Related to Empirical Questions

The following figure shows how aware Dutch consumers are in relation to the pink tax.

Figure 4.3.2

The awareness level of participants of the survey by percentage



Notes. This was created in SPSS Statistics as a line graph presented by percentages.

As a reminder, a new composite variable was created which is the mean of the scale-based responses given for three questions assessing the awareness level of respondents. The questions are mentioned in Section 4.2 for convenience. The scale has 1 as not aware at all and 5 as very aware. Even though the mean of 2.79 indicates that the general sample that filled out the survey was relatively less aware of the pink tax, that is not what the graph above shows. Most participants were at the level of 3.67, which suggests that most of them were relatively well aware of the pink tax.

The following table looks into whether awareness level impacts one's behaviour as a consumer or not, within the survey sample we collected.

Table 4.3.3

Independent Samples t-test comparing high and low awareness participants' consumer behaviour when confronted with the pink tax

Variable	t	Two-sided p-value
Actively searched for equally priced items	-2.81**	0.007
Actively avoided gender-priced items	-2.35**	0.022
Have you changed shopping habits?	-3.64***	<0.001
Scenario 1: Same price razors	0.959	0.347
Scenario 2: Pink tax on razors	0.733	0.469

Notes. This analysis was done using an independent samples t-test in SPSS, split by awareness level which is a variable constructed with the awareness composite variable being ≥ 3 for high and ≤ 2 for low. The asterisks indicate the level of significance (= $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.001$)*

The explanation of the numbers will be taken row by row for ease of understanding. The first row looks at whether the user has actively searched for equally priced items. The next row is similar and looks at whether participants have actively avoided goods that are priced based on gender. The next question plainly asks the respondent whether they have changed their shopping habits in response to the pink tax. In the first scenario, the participants are presented with equally priced and homogenous razors with the exception that one is marketed towards men and the other women. They then have to pick the one they would purchase. In scenario two, the choice is the same but there is a pink tax of 30% applied to the razors marketed towards women. As can be seen in Table 4.3.4 above, there are three main results that are statistically significant and negative (see first three rows). When the t-value is negative, it means that there is a significant decrease between the first and second set of values. Our first set is that of high-awareness participants and the second of low-awareness participants. In the case of rows one and two, this denotes a significant decrease in active searching for equally priced (-2.81**) or actively avoided gender-priced items (-2.35**) when looking at high awareness in comparison to low awareness participants.

The next and highest level of significance occurs when we ask participants if they have changed their shopping habits with a value of -3.64 and a p-value of less than 0.001; this demonstrates that the participants believe that they do change their behaviour when confronted with the pink tax. However, when presented with our curated two scenarios, there seems to be no statistically significant difference between the groups as neither of the t-values

are statistically significant. Even though participants think they behave differently, according to our results, they do not.

The following table will provide data analysis related to the economic impact of the pink tax.

Table 4.3.4

Independent samples t-test comparing the economic impact of the pink tax between the gender identities

Variable	t statistic	Two-sided p-value
Impact on Expenses (Likert scale)	-2.25	0.342
Willingness to Pay (Percentage increase)	-4.94	0.109
Monthly Budget (in Euros)	1.628***	<0.001

Notes. This analysis was done using an Independent samples t-test in SPSS, split by gender. The asterisks indicate the level of significance (= $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.001$)*

In Table 4.3.4, we have presented the variables related to the impact that the pink tax has on the participants surveyed. The first variable judges on a Likert scale the impact of the pink tax on their personal care item expenses. The next variable looks at the willingness to pay more, measured by percentage increase, for a product marketed towards their gender. Lastly, the final variable looks at the monthly budget for personal care items measured in euros. The first two variables indicate negative and statistically insignificant t-values. This demonstrates that men judge a higher impact on their expenses than women (-2.25), though this is not significant. They are also more willing to pay higher amounts (-4.95), again not being statistically significant. These results would lead us to there not being a large or significant difference in the monthly budgets of personal care items between men and women. However, our results show a positive and statistically significant (1.628***) result, indicating that women have higher monthly budgets for personal care items than men.

4.3.2 Analysis Related to Theoretical Questions

The next exploration will be conducted on how perception and consumer behaviour of the pink tax is impacted based on gender.

Table 4.3.5

Independent Samples t-test comparing the perception of the pink tax between the gender identities

Variable	t	p-value
Actively searched for equally priced items	2.47**	0.016
Actively avoided gender-priced items	4.68***	<0.001
Have you changed shopping habits?	3.05**	0.003
Scenario 1: Same price razors		
Fairness composite	1.44	0.163
Unfairness composite	-0.74	0.466
Scenario 2: Pink tax on razors		
Fairness composite	1.174	0.250
Unfairness composite	-1.15	0.257

Notes. This analysis was done using descriptive statistics in SPSS, split by gender and then further by the Scenario picked (through random assignment) by users. The asterisks indicate the level of significance (= $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.001$)*

Table 4.3.5 compares the means by gender and then is further separated by scenarios one and two when inspecting the fairness and unfairness composite variables. The first variable asks whether the participant has actively searched for equally priced items. The t-value (2.47**) for this is positive and significant at the 5% significance level, meaning that women were statistically more likely to actively search for equally priced items. The next row allows us to discern whether participants have actively avoided goods that are priced based on gender. The corresponding t-value (4.68***) is positive and statistically significant at the 1% significance level, insinuating that women were much more likely to actively avoid gender-priced items. This is only natural as women are the ones who are financially impacted by the pink tax, as discovered in Table 4.3.3 earlier. The next variable represents a question that plainly asks the respondent whether they have changed their shopping habits in response to the pink tax. The t-value (3.05**) for this variable was also positive and significant at the 5% level, meaning that women were far more likely to change their shopping habits than men.

The next set of responses was about the scenarios presented to users within the survey. As explained earlier in Section 4.2, random assignment was implied such that each respondent had an equal chance of being placed in each scenario. Scenario one had an equally priced set of two razors and scenario two had a pink tax of 30% applied (see Appendix A for relatively equivalent razors presented in the question). The values below are the fairness and unfairness

composites, which are separated by scenario to judge how genders might perceive the pink tax. Generally, we do see from the positive and negative t-values that women tend to rate fairness higher and unfairness lower in both scenarios respectively. However, this difference is not significant enough to meet any of our significance levels (see fairness and unfairness composite values with the absence of asterisks in Table 4.3.5). Thus, in neither of the scenarios did we see a statistically significant difference in perception between the genders.

The next table presents results from a Chi-squared test of independence, looking at whether there is a relationship between gender identity and the choice made when there is or is not a pink tax present between otherwise homogenous goods. This looks at the two scenarios mentioned earlier with razors and random assignment.

Table 4.3.6

Chi-squared test of independence comparing the consumer behaviour of the pink tax between the gender identities

	Scenario 1	Scenario 2
Pearson Chi-squared	18.06***	8.57**
Asymptotic Significance	<.001	.003
% of expected count less than 5	25%	25%
Fisher's Exact test	<.001	.004
Phi Value	.850	.517

Notes. This analysis was done using Crosstabs and then a Chi-squared test of independence in SPSS, split by gender. The asterisks indicate the level of significance (= $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.001$)*

To start with, it is important to mention the four assumptions of a Chi-squared test such that we are not in violation. They are as follows: both values are categorical, all observations are independent, cells in the contingency table are mutually exclusive, and lastly, the expected value of cells should be 5 or greater in at least 80% of the cells (Moore et al., 2016). To interpret the results, first, we need to examine what percentage of the cells have an expected count of less than five. In our case, in both scenarios, this percentage is 25% which violates the fourth assumption in the Chi-squared test. We then use Fisher's Exact test to determine the significance of the test. For the first scenario, the Fisher's Exact test is less than .001, which makes it significant at the level of 1%. This allows us to safely reject the null hypothesis for this scenario which states that there is no association between someone's

gender and their choice between the two equally-priced razors. The aforementioned analysis allows us to look at the presence of an association, not the magnitude of it, so we have also included the Phi value which tells us the size of the effect. This value is at .850 which shows a strong positive correlation. For the second scenario, the Fisher’s Exact test is 0.004, which makes it significant at the level of 5%. This again allows us to safely reject the null hypothesis which states that there is no association between someone’s gender and their choice when there is a pink tax present. The Phi value present is .517 which shows a weak positive correlation. This is less than for the previous scenario, which suggests that gender has a little less of an impact on the choice you make when the pink tax is considered compared to when it is not.

The table below looks at whether cultural identity has an impact on the perception of the pink tax. The first table looks at all respondents and what they think the cultural impact would be in this situation, and the subsequent table looks at the perception differences in a One-way ANOVA test.

Table 4.3.7

Means and standard deviations of the respondents’ thoughts on whether their culture impacts their perception of the pink tax

Variable	Mean	Std. Deviation
Culture Impacts Their Perception (Likert scale)	1.92	1.071
Prevalent in Other Countries (Likert scale)	1.76	0.678
Noticed Differences Between Countries (Dichotomous scale)	1.78	0.418

Notes. This table is created by conducting basic descriptive statistics related to frequencies on SPSS Statistics.

The means in Table 4.3.7 above indicate that in the first two variables, there is little to no expectation of cultures impacting their perception of the pink tax. In the third variable, where we asked whether respondents had noticed differences in the presence of the pink tax across countries (1 - yes, 2 - no), respondents also expressed that they largely did not as the mean is 1.78.

In the next table, we view the results of a One-way ANOVA test which looks at whether the means across all the countries/cultures mentioned are the same (null hypothesis) or if they are not all the same (alternative hypothesis).

Table 4.3.8

One-way ANOVA test comparing respondents by their nationalities on how they perceive the choice between equally priced or gender-priced goods

Variable	F	Sig.
Scenario 1: Same price razors		
Fairness composite	.93	0.494
Unfairness composite	1.15	0.372
Scenario 2: Pink tax on razors		
Fairness composite	.56	0.757
Unfairness composite	.47	0.826

Notes. This table is created by conducting the One-way ANOVA test on SPSS Statistics.

The One-way ANOVA decisively dictates in Table 4.3.8 above that the cultures did not have the same means in any of the scenarios in the fairness or unfairness composites. This is shown by all the significance values being far more than a significance level of 1%, 5%, or 10% to be considered (0.494, 0.372, 0.757, 0.826). We did intend to do a post hoc test to see perhaps if differences between some groups were significant, but due to the lack of diversity in our sample (which was mostly Dutch, European, and Asian), some of the subsets had less than two cases which meant that these tests could not be performed.

4.4 Interpretation and Discussion

In this section, we bring all our key findings from the previous section to come to an overarching view of the analysis conducted. The general view of the participants will be explored, giving rise to some important insights.

The sample we had demonstrated that they were relatively familiar with the pink tax and the impact that comes with it as a group, but in reality a decent percentage of them were not, as shown in Figure 4.3.2. Further, we looked into whether the awareness level did impact their behaviour. We discovered that being highly aware of the pink tax does make you more likely to actively search for equally priced items and avoid gender-priced ones. In addition, we found that participants themselves believe that they did change their behaviour after

becoming aware of the pink tax. This result though could have also been a result of participants feeling uncomfortable with accepting to themselves that they did not change their behaviour after learning about this pricing practice. This doubt grew as the next conclusion we came to was that there was no significant difference between high- and low-awareness consumers when confronted with scenarios with or without the pink tax applied. This spotlights a want of our participants to have a different habit, but being unable to follow through with it.

Next, we looked into whether there was an economic impact of the pink tax on men and/or women. The only significant result we found was that women do indeed have much higher budgets (1.628, significance level of 1%) in relation to personal care items than men. Further, we discussed whether perception is changed based on gender identity. Similar to earlier, we did find that women thought that they were more likely to actively search for equally priced items and avoid gender-priced ones. This makes sense as men are not the ones impacted by the specific pink tax we are studying, and hence would have no reason to search for a cheaper item. We also discovered that women thought they were indeed much more likely to change their shopping habits than men, which again makes sense as women are the ones impacted by the pink tax. However, at a deeper level, perhaps men and women abstaining from companies that gender-price could bring to popularity companies that price equally regardless of gender. In the end, these companies only continue prices that consumers allow them to continue. On the other hand, the individual effort to make these changes is higher than the benefit that individual consumers (especially men) might receive in exchange. This leads to a harmful cycle when everyone might want something to change, but nobody is willing to step up and boycott the brands that are price-discriminatory. In terms of perception of the fairness or unfairness of the pink tax, there were no significant differences between gender identities. We discovered that gender identity does not influence your perception as a consumer when faced with either equally priced or gender-priced personal care items (razors in our case) as presented by the results in Table 4.3.5.

Lastly, we looked at whether there are any differences in perceptions of the pink tax between cultures. We found that our respondents did not believe that either their or someone else's culture impacts their perception of the pink tax. We also asked whether they noticed differences between countries in the presence of the pink tax, to which there is no statistically significant acceptance. We then looked at how different cultures perceived fairness and

unfairness when faced with choosing between two equally priced or gender-priced goods. We found no statistically significant answers, again suggesting that cultures/regions of nationality do not have a large impact on one’s perception of the pink tax. This means that the OECD Tax report mentioned in Section 2.3 was not a good proxy for how the citizens of that country might perceive the pink tax (OECD Publishing, 2022). Nonetheless, we cannot forget that our number of respondents was quite low outside of Dutch, European, and Asian, and thus the external validity of this discovery is likely incredibly low.

Provided in Table 4.4 below is a summary of the most important outcomes of the analysis.

Table 4.4

Empirical Framework: The most important outcomes of this research based on the sample

Finding	Section	Table/Figure Number
Participants were quite familiar with the pink tax	4.3.1	Figure 4.3.2
Participants believe that: - being highly aware of the pink tax makes you more likely to actively search for equally priced items and avoid gender-priced ones - they did change their behaviour after becoming aware of the pink tax Overall: There was no significant difference between high and low awareness consumers when faced with the choice	4.3.1	Table 4.3.3
Women do indeed have much higher budgets with relation to personal care items than men	4.3.1	Table 4.3.4
Women believed that: - they were more likely to actively search for equally priced items and avoid gender-priced ones - they were more likely to change their shopping habits There were so significant differences in perception between the genders	4.3.2	Table 4.3.5
There seems to be a correlation between your gender identity and the choice made when there is a pink tax in place in comparison to when not	4.3.2	Table 4.3.6
Consumer behaviour or perception remain unchanged by culture	4.3.2	Tables 4.3.7 and 4.3.8

Chapter 5: Conclusion and Reflection

The purpose of this chapter is to provide an answer to all the questions posed at the beginning of this paper, along with some recommendations for future research. We will go through the objectives, sub-questions, and the final answer that has been discovered, along with an overarching answer to the main research question. A final reflection will be presented regarding the methods and possible future changes.

The main objective of this study was to contextualise the perception and the impact of the pink tax on adults between the ages of 18 and 30 in the Netherlands with a focus on personal care items. We wanted to see a glimpse of the thoughts behind the purchases that consumers might make, and their perception of fairness after that. We did have most of our respondents within the aforementioned age range (Table 3.4.1) and focused on one specific personal care item that both men and women use. We presented two otherwise equivalent razors with the exception of gender-based marketing/packaging, one set equally priced and another gender-priced. The participants were randomly assigned and so each had an equal chance in being presented with either set. We found that although awareness level did not make a difference in making a choice, gender did make a difference. With only these results, we have already provided a lot of context as to what the general consumer in the Netherlands might think.

5.1 Central and Sub-Research Questions

After this abridged summary along with the addressing of the objective, we will now inspect the central research question which was defined as: *To what extent do Dutch consumers perceive the concept of the pink tax, and how does this perception impact their choices in purchasing personal care items?*

To fully answer this question, we will first provide some decisive answers to all the research sub-questions that were presented in Section 1.4. By also including the findings from the literature review, we will be able to provide a full answer to these and the central research question.

Research question one: *To what extent does gender identity influence the perception of the pink tax and subsequent consumer behaviour?*

In the literature review, we concluded that we should expect a marginal or no significant impact of gender identity on the perception or consumer behaviour (Section 2.2). In our

results, we found that there was indeed no statistical difference in perception of the pink tax as expected (Section 4.3.2). However, we also found that there was a statistically significant impact of gender identity on the consumer behaviour of participants (Table 4.3.5). With the Phi value considered, we found that there was somewhere between a weak and strong positive correlation between being female and the choice between razors they make in either scenario one or two (Table 4.3.6).

Research question two: *Are there any significant differences in perception of the pink tax between nationalities/cultures?*

In our literature review, we found that we should expect a difference in perception of the pink tax between nationalities/cultures (Section 2.3). In our data analysis, we found that our participants did not anticipate or notice changes in perception or presence of the pink tax over countries (Table 4.3.7). Further, we compared the consumer behaviour of participants which also yielded statistically insignificant answers (Table 4.3.8). These aforementioned results lead us to believe that there were no significant differences in the perception of the pink tax between regions.

Research question three: *What is the level of awareness of the pink tax among consumers in the Netherlands?*

Within Section 4.3.1, we state that the level of awareness about the pink tax is generally high among our participants. The distribution is spread across levels, making our analysis varied.

Research question four: *What are the behavioural patterns exhibited by consumers who are aware of the pink tax, and how do these patterns differ from those who are not aware?*

We found that although participants believe that their behavioural patterns have been changed by their awareness level, this is not true when they are presented with the choices (Table 4.3.3). This is not a result that we expected, however, it is one that makes sense when one weighs the individual effort needed to dismantle the pricing practices that companies have been doing for decades versus internalising the impact it has on the expenses that one has been dealing with for those same decades.

Research question five: *What are the economic consequences of the pink tax on consumer spending on personal care items between gender identities?*

Pursuant closely to the last question, we find that there are not statistically significant differences in the perceived impact on expenses or willingness to pay (percentage increase) for a gender-marketed product (Table 4.3.4). In contrast to this conclusion, we find that there is a strong impact of gender on the monthly budgets for personal care items (also Table 4.3.4). We find that women tend to have higher monthly budgets for personal care items at a significance level of 1%.

In summation to address the central research question, how consumers perceive the pink tax is a question that is quite difficult to answer. They are generally aware and knowledgeable of the pink tax and its impacts. Overall, we see results that when there is a pink tax in place participants tend to find it unfair. This seems to be true across nationalities and genders, even though women might perceive it as naturally more unfair than men. Subsequently, consumers do tend to change their behaviour when faced with scenarios they may encounter at the supermarket. Overall though, women are naturally much more likely to change their behaviour than men are. This is only logical as the women are the ones facing higher prices and higher budgets for personal care spending at the end of the day.

5.2 Reflection and Recommendations

The biggest limitation of this study is the number of participants. In totality after data processing, we were left with 59 respondents (6 were removed). This number simply is not enough for the level of diversity we craved in our analysis, as shown in the descriptive statistics presented in Table 4.3.1. In addition, the population that we pulled our sample from was largely college-educated individuals in the area of Rotterdam where the network of the researcher reached. The study would largely benefit from different samples of 50-100 individuals pulled from 5-6 large cities across the regions of the Netherlands to truly be able to make externally valid statements. To state that the results would represent the average resident of the Netherlands would be an unfounded claim, as the sample we have is not varied enough to represent the nation. This is largely due to budgetary and time constraints that come with a bachelor's thesis written by an individual student in comparison to a team of seasoned researchers.

Further recommendations would be to create more real-life scenarios and compare a variety of goods across the personal care industry. A razor was picked as it is most likely to be homogenous at the grocery store and depends less on personal preference in contrast to a

shampoo with drastically varying levels of quality. It would be interesting to see whether the results found would still hold across products, even if there was a shelf of 10 to 15 different options. An option would be to create a fake online grocery store website and track the purchases of the consumers after gathering personal demographic data about them. Another way to enhance them is to track their eye movements, which can give rise to not only the products they pondered over prior to making choices but also the emotions detected on their face when they see a pink tax applied for instance.

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Appendices

Appendix A - The Survey

Link: https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_89crMUW60nlBhMq

Survey on the Perception and Impact of the Pink Tax on Consumers in the Netherlands

Dear Participant,

Thank you for taking the time to participate in this survey.

We kindly request your cooperation in providing valuable insights for our research on the perception and impact of the pink tax on consumers in the Netherlands, specifically related to personal care items. Please read the following information carefully before proceeding.

Research Overview:

This survey aims to explore the influence of gender identity on the perception of the pink tax, as well as to investigate any significant differences in perception between nationalities or cultures. Additionally, we seek to understand the level of awareness and perception of the pink tax among consumers in the Netherlands, as well as the behavioural patterns exhibited by those who are aware versus those who are not. Furthermore, we aim to examine the economic consequences of the pink tax on consumer spending on personal care items based on different gender identities.

Consent:

By continuing with this survey, you confirm that you have read the above information and voluntarily consent to participate. You understand that your participation is completely anonymous, and your responses will be used solely for research purposes. You have the right to withdraw from the survey at any time without providing a reason. Please note that your completion of the survey implies your consent to participate.

If you have any questions or concerns regarding this survey or want to know the results of the research, please feel free to contact Ridhima Shrivastava at 558085rs@student.eur.nl or ridhimashrivastava@gmail.com.

Thank you for your valuable contribution!

What is your gender identity?

Male

Female

Non-binary

Prefer not to say

How old are you?

Under 18

18-20

21-23

24-26

27-29

30-32

33-35

35+

What is your primary nationality/cultural background?

Dutch

European

Asian (including the Indian subcontinent)

African

North American

South American

Middle Eastern

Other

What is the highest degree or level of education you have completed or are currently in?

High School

Trade/technical/vocational training

Bachelor's Degree

Master's Degree

Ph.D. or higher

On a scale of 1 to 5, how aware are you of the price differences for personal care items based on gender? (personal care items include any product you apply externally for hygiene/scent purposes)

1 (Not aware at all)	2 (Slightly aware)	3 (Moderately aware)	4 (Very aware)	5 (Extremely aware)
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How often have you noticed price differences in personal care items (such as razors) solely based on gender-based marketing?

Always	Frequently	Occasionally	Rarely	Never
--------	------------	--------------	--------	-------

Have you ever actively searched for personal care items that are priced equally regardless of gender?

Yes	No
-----	----

Have you ever avoided purchasing a personal care item due to perceived gender-based pricing?

Yes	No
-----	----

Following this section, the term "pink tax" will be used. This term describes a gender tax; a markup on goods or services marketed towards women. These goods or services have a limited or negligible difference to extremely similar goods marketed towards men and priced at a lower point. A common difference is the colour of the product or the packaging.

Please indicate how much you agree with the statement provided.

	None at all	A little	A moderate amount	A lot	A great deal
I have a proficient understanding of the pink tax.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am knowledgeable of the pink tax.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about the pink tax affecting my purchasing decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that my cultural identity affects my perception of the pink tax	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you believe the pink tax is more prevalent in certain cultures or countries?

Yes Maybe No

Have you noticed a difference in the prevalence of the pink tax between different countries?

Yes No

If you are aware of the pink tax, have you changed your shopping habits in response to it?

Yes

No

Not applicable, I didn't know about it

On average, how much more are you willing to pay for a personal care item if it is marketed towards your gender? (Percentage increase)

Low 0 10 20 Somewhat 30 40 50 60 High 70 80 Very High 90 100

Percentage INCREASE



How much do you spend on personal care items per month? (Specify amount in Euros; personal care items include any product you apply externally for hygiene/scent purposes)

How much of an impact do you think the pink tax has on your overall personal care item expenses?

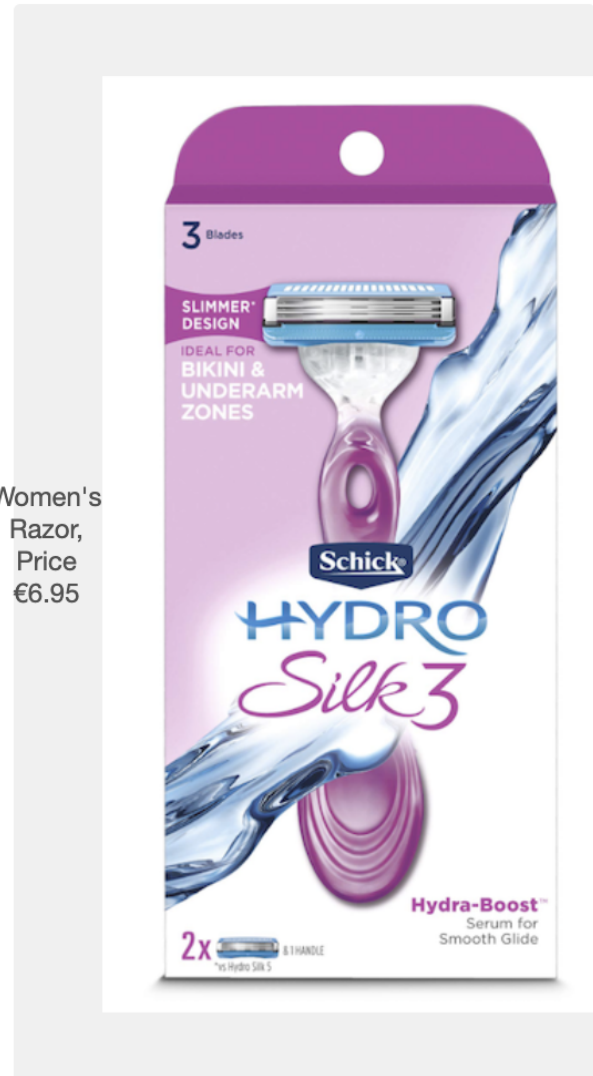
- No/Negligible impact
- Slight impact
- Moderate impact
- Significant impact
- Very significant impact

Pick a character to continue

Suppose you are shopping for a specific personal care item, such as a razor, and you come across the following two options. Pick the one you would choose:



Men's Razor,
Price
€6.95



Women's Razor,
Price
€6.95

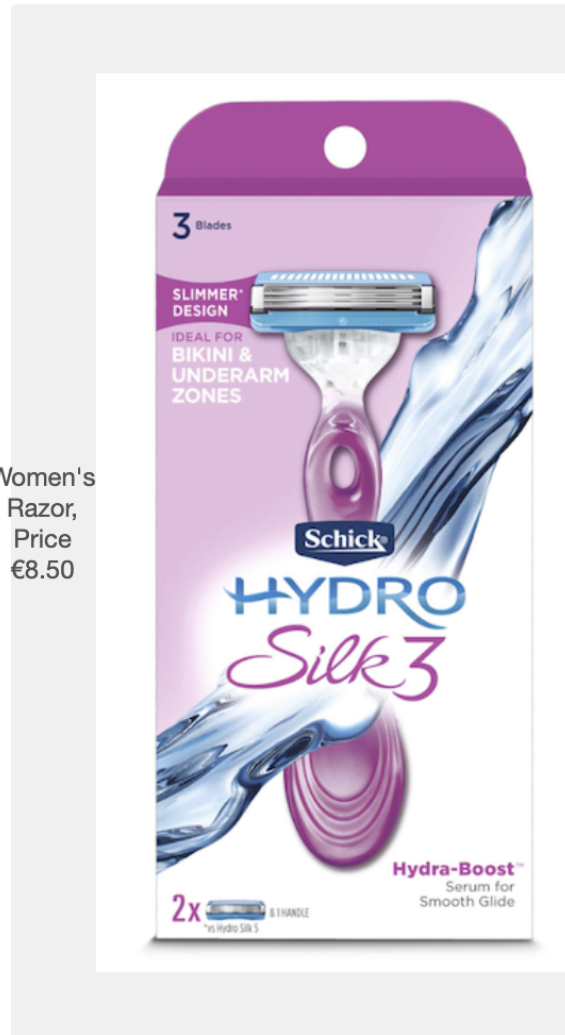


Scenario 2

Suppose you are shopping for a specific personal care item, such as a razor, and you come across the following two options. Pick the one you would choose:



Men's
Razor,
Price
€6.95



Women's
Razor,
Price
€8.50

Which product had a higher price?

Men's Razor

Women's Razor

Neither

Please fill this in according to the two items presented to you

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I think the prices are reasonable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the prices are justified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the prices are acceptable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the prices are unreasonable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the prices are unfair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the prices are unacceptable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you so much for participating in my thesis survey! Again, feel free to reach out to me with any questions at 558085rs@student.eur.nl or ridhimashrivastava@gmail.com.