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**Drivers of Organic Food Purchase Satisfaction:**  
**The Role of Age and Gender in Rotterdam**

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## ABSTRACT

**Purpose:** This research aims to explore drivers of consumer satisfaction towards organic food purchases. Specifically, it wants to examine the role gender and age play in changing the interaction between driver and satisfaction.

**Methodology:** The research employed quantitative methods to answer its questions. The data was collected at a green store in Rotterdam via survey. The studied drivers were environmental concern, health concern, social awareness, price, quality, taste, freshness, and eco-labelling. The data was analysed by principal component factor analysis (PCA), to uncover underlying factors, as well as multivariate regressions. Of these regressions, the last two were between 2 discovered factors and the interaction terms age and gender. The main hypothesised outcomes of the research were that females would lay relatively more importance to health, respectively men to quality drivers. Instead, age effects were hypothesised to be divided into egoistic (health, price and quality) and altruistic (environment and social pressures drivers). Younger generations expected to give relatively more importance to the egoistic.

**Findings:** In the first regression only environmental concern, health concern, quality, and taste were found to be statistically significant predictors of satisfaction. Afterwards, two factors were observed: one egoistic in nature, including health concern and the quality drivers (quality, taste and freshness). Contrarily, the second factor is defined as altruistic, its main components being environment concern and eco-labelling. The egoistic factor was found to play a greater role in purchase satisfaction. Finally, the interaction regressions showed gender to be inconsequential in affecting the weights of the drivers, however, age was found to be highly significant with regards to the egoistic factor interaction. This implies a correlation with age and egotism of the drivers of organic food purchases. This, while in contrast with some findings in the existing literature, does not contradict all.

**Research implications:** This research contributes to the understanding of organic food consumers. What drives them to purchase organic foods and with what weights. More importantly it looks at gender and age differences in these relationships. The research shows great promise as per the goal and some of its findings. More extensive effort on the topic, with an expansion of socio-demographics covered, could be highly insightful.

**Practical and Policy implications:** For marketeers the suggestion is to focus on promoting environmental benefits and superior quality of organic to appeal to older generations, as costumers appear more egotistical with age. On the side of policy makers, the focus should be on efforts for awareness on the benefits of organic foods, keeping in mind quality, environment and health being the strongest motivators. This should go along improvements onto the informative power and trustworthiness of eco-labels, which addresses the other drivers too.

**Originality:** This paper tried a novel approach to the field of organic food, though present in the context of green purchase behaviour. It is a proof that the moderation of demographics here is relevant and should be explored further.

**Keywords:** Organic food, consumer satisfaction, age differences, gender differences



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# 1 Introduction

## 1.1 Introduction to organic food consumption

We see consumers, across industries, shifting to environmentally conscious purchasing decisions. This is also reflected in the academic focus on the topic, studying how the market has increased, as well as being aware of the drivers that dictate this consumption. The past work shows how knowledge rewards companies that employ it (Hazaea et al., 2022). One of the many faces of this cultural change is organic food consumption, which has been a constantly rising trend in recent decades. Organic foods in Europe are defined as those produced “respecting the rules on organic farming.”, said rules are the prohibition of Genetically Modified Organisms (GMOs), forbidden use of ionising radiation, limited use of artificial fertilizers, herbicides and pesticides, and prohibition of the use of hormones and antibiotics outside of necessary cases (Organic production and products, 2024). These are quite uniform standards across countries, in fact, similar is the case for the United States Department of Agriculture (USDA) certification. Differences lie in the cases where the use of antibiotics is accepted as well as the range of ‘organic rate’: the EU symbol guarantees 95% organic content while in the US there is different labels for 100, 95 and 70% (Btsa, 2024). International organic food certifications, like the aforementioned EU one, ensure that consumers are guarded. Following organic production methods also caters to other preferences beside the environmental, such are, personal health and quality of the product. Naturally, these preferences showcase different weights on consumer behaviour, as studied by Paul, J., & Rana, J. (2012). In their research, they study how different product attributes affect organic food consumers’ satisfaction. Since individuals are willing to pay a premium for the characteristics that organic foods possess, understanding consumers’ attitudes and weights towards these individual characteristics would help the organic food industry match their offer to the needs of the customer.

Research on the topic of organic foods has been quite extensive in covered variables and methods. Arguably, this is due to its ethical importance as a product of environmentalism and its rising prominence in the consumers purchasing decision. The aspect covered by said literature that apply to my interest have been studied under different names but narrow down to the matters of availability, personal health and well-being, quality, environmental awareness, social pressure, and price. For example, in the paper by Paul, J., & Rana, J. (2012), the relationship between some of these “variants” was studied via a questionnaire on overall and individual variant satisfaction for organic purchases, which was conducted in North India. The result of their factor analysis identified two components to products: an informative part (packaging size, variety, information and availability) and a second component made by core product characteristics (quality, freshness and taste). In the regression, both components turned significant predictors of satisfaction, the second factor being more important. Separately in the paper, they studied the reasoning for buying from a health and environmental perspective. The results show much greater preference for personal health reasons rather than environmental packaging and production methods. When looking outside of this paper, we come across

an extremely comprehensive literature review by Katt, F., & Meixner, O. (2020). Their review looks at willingness to pay (WTP) rather than satisfaction, however, assuming the two are somewhat interchangeable, the review presents interesting findings. They report that the literature is at times conflicting, i.e. food safety (under the personal health bracket), while studied more than 30 times, it produced conflicting evidence on its role; similar is the case for price. As stated in Rana, J., & Paul, J. (2017) own review, price can react in the consumers mind in two opposing ways: while striving to spend the least, price can also be a signal for quality and for social acceptance as a staple of luxury. Hence, the contradicting literature findings.

## **1.2 Relevancy of study on organic food**

The main article that drove my interest to the subject (Rana, J., & Paul, J., 2012) features a theoretical framework in which one of the hypotheses is “satisfaction level varies for the different attributes for organic food.” This is the main relationship I will aim to study. However, satisfaction, and WTP in the case of the literature covered by Katt, F., & Meixner, O. (2020), has also been tested to being affected by other drivers, namely demographics. Demographics is indeed studied by the same Rana, J., & Paul, J. (2012) paper, however it is studied as an unrelated driver via the hypothesis “there is difference in preference for organic food by various demographic factors.” This is a common feature of the literature on the field. However, as stated by Kanchanapibul et al., (2014), attitudes of young generations towards eco-friendly matters and consumptions are changing and diverse from those of older generations. Specifically, literature by Casalegno et al. (2022) and Dagher et al. (2015) respectively find generational and gender differences. These study green purchase behaviour, but it can be transferred to the subtopic of organic foods. Thereby, it raises the question of how demographics affect the attitude portfolio of satisfaction when purchasing organic foods. This relationship being somewhat overlooked in the literature on organic food specifically.

Organic food products in Europe are capturing bigger chunks of the market year after year. In fact, in 2022 alone the farmland dedicated to organic farming rose by 10.8% from 2021 (IFOAM Organics Europe, 2024). Moreover, at 45.1 billion euros in revenue, Europe is the second biggest market, just behind the USA. The ambiguity about generational and gender attitudes towards organic food products together with the ever-growing market for organic foods in Europe renders this an interest field of study. Such an investigation would provide useful as it would help understand changing landscape of consumer preferences towards product attribute makeup. In fact, understanding generational and gender attitudes to specific attributes of organic products could help market them better and influence green habits of the population. This research appeals to both businesses and policymakers.

## **1.3 Central research question**

Building upon the work done by Rana, J., & Paul, J. (2012) in their paper, this research will look at the drivers of purchase satisfaction. In doing so we want to find out how this ‘portfolio’ of attributes that



affect organic food purchases satisfaction, hence what people look for in their organic products. Specifically, this research aims to extend the work done by Rana, J., & Paul, J. (2012), by looking at the differences in these drivers for different ages and sexes. Therefore, the central research question reads:

*“How is the portfolio of drivers for organic food purchase satisfaction affected by age and gender?”*

To develop an answer to the central question we need to build a framework on how satisfaction (our measurable variable) can be a descriptor of behaviours. Hence the sub-questions we will answer start by explaining the connection between satisfaction and purchase intention.

### **1.3.1 Theoretical sub-questions**

1. How does stated satisfaction describe consumer purchase intentions?
2. What are the drivers' satisfaction that have an effect on overall satisfaction of organic food purchases?
3. What are the weights of these drivers' satisfaction on overall satisfaction of organic food purchases?
4. How does gender affect the weights of drivers' satisfaction of organic food?
5. How does age affect the weights of drivers' satisfaction of organic food?

### **1.3.2 Empirical sub-questions**

4. What are the underlying factor weights of organic food purchase satisfaction among Rotterdam organic consumers?
5. How does age affect the weights of the factors on overall organic food purchase satisfaction?
6. How does gender affect the weights of the factors on overall organic food purchase satisfaction?

## **1.4 Possible research limitations**

This research faces some limitations. Firstly, considering sub-questions 4 and 5 covered in the next chapters, it will be hard to assess a hypothesis. This is the case because of the trend in existing literature on the field to use demographics as a predictor of organic food purchases. Contrarily, in this paper demographics will be treated as a moderator of the effects of product attributes of organic food. However, this apparent gap in the existing literature can be addressed by looking at research analysing generational (age differences) and gender attitudes towards each specific attribute that we will theorise to be a possible predictor of organic food purchase satisfaction, e.g. how gender has been found to play a role in food purchases, having females being relatively more concerned with health standards (Bellows, Alcaraz and Hallman, 2010).

Secondly, a potential limitation to the academic relevance of this research is the limited sample size and location achievable. This research will be conducted by a student with limited financial and time resources. This forces the collection to be done in person outside of organic food stores, to ensure high response rates and peer pressure into participation. While allowing the process to be conducted at little monetary expense, it limits the statistical possibilities of the findings. For instance, it requires the survey to be time inexpensive in order to be attractive, removing the possibility for much redundancy and in-

depth questions. This comes along with de-focussing from other demographical questions, such as household and income queries, to not disincentivising people from taking part by asking very personal information. The data collection method also provides somewhat of an unrepresentative sample of the population. This shortcoming of the research is dimmed by its scope, which only looks at current organic food consumers preferences, instead of the population as a whole. It also aims at and that it aims at highlighting age and gender differences in consumer profiles rather than being representative research on the market for organic foods.

## **1.5 What is to come**

Chapter 1 lays the foundations of the research, explaining the source of inspiration for this topic. We developed our hypothesis upon it and explained the possible hiccups that can incur along the way. Now we look at how to coherently answer the many questions posed. Bearing this in mind, chapter 2 will go through existing literature in the field to explore the different findings on organic food consumption behaviour. Following step by step the sub-questions posed in chapter 1, the theoretical framework will develop hypothesis for the subsequent field research. Having built the theoretical framework, we can start the original research part of this paper with chapter 3. This will explain how we aim to gather the required data as well as which specific statistical tools to make use of. In turn, chapter 4 will be where all the work will take proper shape, by going through the meaning behind the numbers in the statistical analysis. The scattered information along the 4 chapters will be pooled together and contextualised in the final chapter. Chapter 5 will therefore present a clear and concise conclusion to the research as well as its applicability and future suggestions for the research's development in the future by organizing and contextualising the evidence in the previous 4 chapters. The hopes for the impact of this research are high since it looks at better understanding consumer drivers towards a sustainable practice. Better understanding how different individuals look for could help targeting consumers of organic products more effectively. Making sustainable practices more attractive is, in my humble opinion, the more ethical way to promote pro-social and healthy behaviours when compared to mandates.

## 2 Theoretical Framework

The steady growth of organic food consumption in Europe as well as the rest of the world has sparked research on the topic in the last 3 decades. Specifically, in Europe in the last 10 years, the market for organic foods saw a 125% increase, thereby averaging about 8.5% growth every year (IFOAM Organics Europe, 2024). If considered that this growth stalled in the two years of COVID-19, it means that the market in normal conditions saw a double-digit percentage increase every year. Similarly, the volume of research on the attitudes towards organic food is astonishing and was grouped together in various literature reviews that usually look at work produced on the subject from the late nineties to today. The size of existing literature is of great importance to us since it allows to make educated decisions during the construction of our research design, survey and analysis, as well as allowing us to compare and corroborate our findings to existing evidence, giving it more context and credibility. The following sections will look at existing literature with the goal of answering the theoretical sub-questions posed in section 1.3.1.

### 2.1 How does stated satisfaction describe consumer purchase intentions?

First of all, it is important to state the interchangeable use of satisfaction and importance mix of drivers to explain purchase intentions, namely, what consumer look for in a product. The comprehensive article by Tudoran, Olsen and Dopico (2012) outlines “the translation of stated satisfaction to purchase intentions”. Moreover, it explains how importance plays the role of weight to different driver satisfactions in building the product mix that the ‘consumer intends to buy.’ This leads to the first hypothesis and the very beginning of the conceptual framework.

H1: *The satisfaction importance mix is a good descriptor of purchase intent.*

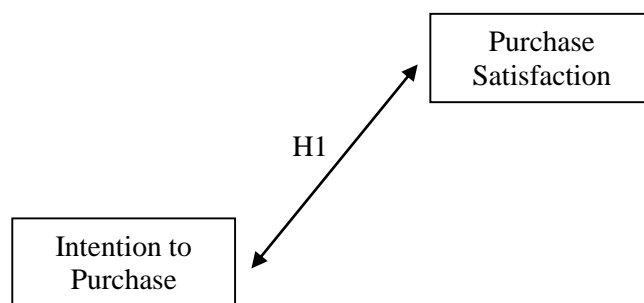


Figure 1: Graphical representation of the link between purchase satisfaction and intention to purchase, adapted from Tudoran et al. (2012)

### 2.2 What are the drivers of organic food purchases?

The factors that influence consumer behaviour towards the purchase of organic food have been grouped by the in-depth review by Dangi, Gupta and Narula (2020). In their work, they highlight how these

factors supergroups are consumer psychographics<sup>1</sup>, product related factors, socio-demographic<sup>2</sup> factors and supply related. They also note how supply related factors have a considerably lower impact on purchase behaviour relative to the other 3 supergroups. Comparable are the supergroups identified by Katt and Meixner (2020). Their review looks specifically at Willingness to Pay (WTP) as the outcome, nonetheless it reviews intention and purchase behaviour. It is therefore suitable to building this theoretical framework. In their work they divided the factors into consumer-related, product-related and purchasing venue drivers. The factors within the consumer-related supergroup include socio-demographics and psychographic factors, while in the purchasing venue drivers are included factors that would fall in the supply related supergroup of the previous review. Comparatively to the review by Dangi, Gupta and Narula (2020), supply related factors are studied much less in the context of organic food purchasing behaviour, however, in the limited research they were able to cover they found that supply related factors such as type of store (e.g. convenience, farmers market, etc.) or perception of retailer's brand have a significant influence on WTP, mentioning how this is the case due to the trust that people assign to locations and brands.

Looking within the other 3 supergroups we can now start listing drivers that have consistently been found to play a role in purchasing behaviour. In order to list the drivers within these supergroups in existing literature, we will use the two previous reviews as well as the review by Hughner et al. (2007). Their work does not explicitly differentiate into super categories, yet still feature a lot of the same drivers, thereby substantiating the list further.

Starting with the product related supergroup, all reviews found various indicators of 'quality.' The review by Hughner et al. (2007) only identifies taste. However, the remaining two reviews also mention perceived quality and perceived freshness. When these are present at the same time in literature they are treated as distinct factors. In order to replicate the main research by Paul and Rana (2012), it has therefore been decided to focus on all three. Another recurring driver of purchasing is of course price. This is covered uniformly in all literature, as well as being included in the study we aim to build upon.

The final product related driver is a more inclusive and nuanced one. Often, in the literature the concept of trust appears, like the aforementioned trust towards brand and location (Hughner et al., 2007). This concept appears often alongside the labelling of organic food products. Likewise, this is the case for packaging which often is affected by informational power of packages and labels. Therefore, an inclusive driver of purchase satisfaction that is identified and will be used in this research is Eco-labelling, it includes trust and informational value of label and package. This is the first slight adjustment

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<sup>1</sup> "Psychographics are data about people's attitudes, interests, and opinions (AIOs) that allow marketers to cluster consumers into similar groups based on lifestyles and shared personality traits." (Solomon, 2004)

<sup>2</sup> "Socio-demographics refer to a combination of social and demographic factors that define individuals in a particular group or population." (Amirzamiafshar and Diana, 2022)

from the original research which looked at informational packaging specifically and did not look at labelling.

Psychographic drivers, or more simply, consumer’s values and attitudes, were mentioned as major factors across the board. Personal health, environmental, and social concerns. The last one, covered under different names in the reviews, from fashionable component to cultural values, boils down to the matters of social pressures and/or conformity.

The demographic drivers present in the literature are age, gender, income, education, and household status. These are mentioned to play a role by the works of Dangi, Gupta and Narula (2020) and Katt and Meixner (2020). While in the review by Hughner et al. (2007) only age and gender are both mentioned once. In fact, Dangi et al (2007) does state how socio-demographics cause psychographics in the literature. Because of the socio-demographics ‘being the cause of psychographics’ their effect on consumer behaviour is already captured and will not be evaluated in this specific research. As explained in chapter 1, introducing more and in-depth personal questions brings the risk of disenfranchising respondents to take part in the survey, making it impractical for research. Similarly, Katt and Meixner (2020) note how gender and age have been found to affect the other drivers, particularly the psychographic health and environmental consciousness, while income more directly affects the WTP because of price sensibility. Because of the specific scope of this research, which is to find the gender and age influences on the drivers of organic food consumption, gender and age will not be used as predictors of purchase satisfaction directly. Rather they will play a role in the later stages as moderators of purchasing behaviour. This therefore leads to the second hypothesis and the subsequent enlarged version of the conceptual framework.

*H2: The main drivers of organic food purchase behaviour are either psychographic or product related.*

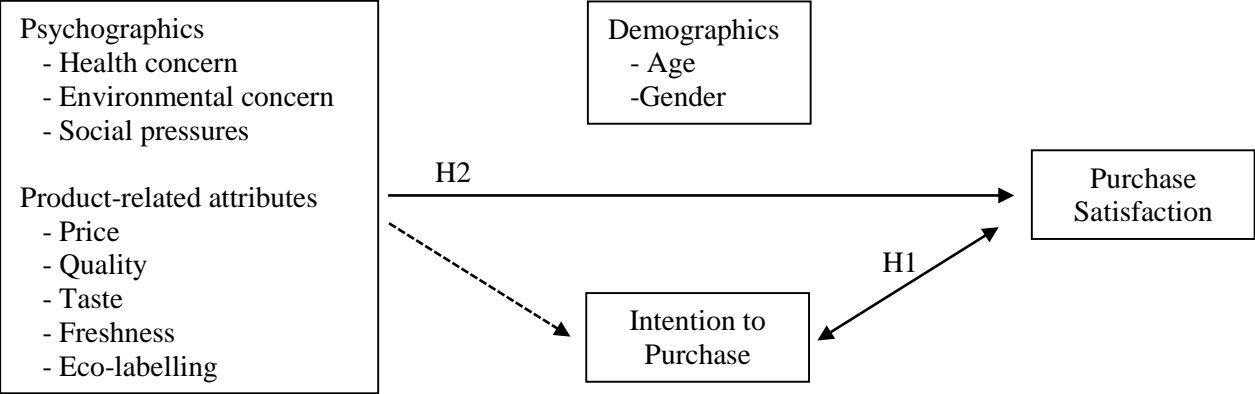


Figure 2: Conceptual framework adapted from inspirational article by Paul and Rana (2012)

### **2.3 In which way do these identified drivers affect organic food purchases?**

Now that the main drivers have been identified, we can start looking more in depth at the hypothesised relationship between drivers and purchase satisfaction. More importantly we want to argue which are expected to play the bigger roles in consumer behaviour.

Starting from the psychographics, health appears to be a stronger motivator of organic purchase behaviour than the environment, according to a European study by Shepherd et al. (2005). Similar are the result of the research conducted by Hansen et al. (2018), where they highlight that egoistic motives (i.e. health consciousness) supersedes altruistic ones (i.e. environmental consciousness). In their paper they also notice how social consciousness (a mix of altruistic and egoistic) was also a relatively weaker driver to consumer behaviour. The third confirmation of this literature consensus on the topic, comes from the work of Hansmann et al. (2020). In the same work, it was also proposed an explanation by egoistic versus altruistic motivations, stating that the altruistic ones seem too distant to play as big a role as health concerns.

When looking at product-related drivers, we first come across price. In the literature it is evident how this creates conflicting conclusions as price of organic foods both acts as a deterrent (Sriwaranun et al., 2015), how consumer goods work, but often price can be viewed by consumers a signal of quality and safe practices, making price less relevant to their purchase intent (Tsakiridou et al., 2008). Thereby, the importance of the price factor may vary depending on the consumer profile. However, because of the prominent role it has in lower income demographics, like younger people are expected to behave in this study, it is expected that price will play a considerable deterring role in purchase satisfaction of organic foods. If so, this will show also when moderating for age.

Quality, freshness, and taste in the literature often gets treated as one, there is however specific interactions that differentiate them. For example, freshness is sometimes found to be a component of the healthier attributes associated with organic food (Sierra et al., 2015), while taste is associated with organic foods in general (Bruschi et al., 2015). These two together feed into the overall perceived quality of the purchase. This however relies on the perception of the consumer of organic food and the assumption it makes. In fact, Apaolaza et al. (2017) show how positive perception of organic labels feeds into the perceptions of quality, and in turn freshness and taste. To this follows that the more the consumer feels informed about the organic standards of the product the greater the effects are (Janssen and Hamm, 2012).

This investigation of existing literature clears the picture of the organic consumer profile built by past researchers. The following three hypothesis answer the third sub-question for psychographics and for product-related attributes.

*H3.a: Health concerns play the greatest role amongst psychographics in organic food purchase intention.*

*H3.b: Price satisfaction has a significant effect on overall satisfaction of organic food purchase.*

*H3.c: Eco-labelling perceptions together with quality drivers have a significant effect on purchase satisfaction.*

## **2.4 How does gender affect consumer drivers towards organic food?**

While gender is used in literature as a predictor of organic purchase behaviour, here we want to answer what is its effect on the importance the individual gives to specific drivers. We start by looking at the work by Dagher et al. (2015) who argued that females are relatively more prone to environmental purchases, having “a stronger ethic to care”. This argument is substantiated also by the research of Lasuin and Ng (2014) that reached the same conclusion between male and female peers. Inversely, in the same article on environmental purchasing behaviour it is found that males are more concerned with self-image compared to their female counterparts. promoting the idea that males tend to take part in green purchasing behaviours relatively more due to social pressures. Gender driver differences are found also towards the health component, where females are also found to care more about the health component (Irianto, 2015). Yet Bellows et al. (2010) place the health component as the least gender differentiated among drivers of organic food consumption. In that same research, it was found that female lay slightly more importance on nutritiousness of food mentioning, among other, vitamin content. This could play a role in the quality driver of organic purchases. Contrarily, in a study from Spain by Ureña et al. (2007) it is found more significantly that “women take greater advantage of discounts and concede more importance to the flavour of food than men”. This leads to the idea that product quality related drivers play a greater role in men compared to women, where men tend to be satisfied with higher prices if quality is matched. This study also corroborated the findings on health having greater weight in the purchasing decision of women rather than men. From this research also comes an insight on information requirement, women having higher standards for eco-labelling on products to match their expectations. This could translate in a relative higher importance on eco-labelling for females than males.

*H4.a: Male driver weights are relatively higher for social pressure, and product perceived quality, freshness and taste.*

*H4.b: Female driver weights are relatively higher for environmental and health concerns, as well as price.*

## **2.5 How does age affect consumer drivers towards organic food?**

We can start answering this question by taking a look at the work by Casalegno et al. (2022) which analyses green purchase behaviour amongst generation X (1965-79), Y (1980-97) and Z (1998-2010). In it is found how the younger generation is more affected by social pressures than the older one, as well as being more negatively affected by prices. This is in line with younger generations having less disposable income and therefore giving more weight to the price component of purchases. It is also found that all generations are more motivated by egotistical drivers. In turn, this leads older generations

to be less affected by the environmental component due to distance of its effects on their person, while for the younger generations this communal benefit is seen as translating to a personal one not very far in the future. This goes in contradiction with the findings of Ham et al. (2021), they found how *baby boomers* (before Generation X) are more affected by environmental and altruistic concerns, this is explained in the paper by arguing that this generation has more people dependent on them and thereby they display more communal tendencies. In turn, they argue younger generations being more driven by the ‘independent self.’ This study, unlike the previous one, substantiated its findings with existing literature, while the other mentioned the contradiction with past research. Ham et al. (2021) also found how the price component was less of a deterrent for older generations, unlike the research by Casalegno et al. (2022), it is argued that this stems by the stricter standard of requirements the older generation has, which translates into a greater WTP for the green product premium. This substantiates the price component playing greater role in younger generation purchase behaviour. The paper concludes its findings by stating older generations feeling more social pressure to buying green products due to the blame laid on them for the environmental crisis while young generations’ decisions are driven by more utilitarian reasons, price, as stated before, and quality. The research by Kamenidou et al. (2020) also corroborates the findings by Ham et al. (2021), namely, they find younger generations being more affected by the price component. The literature paints quite a clear picture on most matters, leading to the following hypothesis.

H5.a: *Older generation driver weights are higher for environmental concern and social pressures.*

H5.b: *Younger generation driver weights are higher for egoistic components: health concern, price and quality.*

## **2.6 Summary**

### **2.6.1 Literature**

Overall, there is extensive literature for each specific question. This is not a surprise since research on organic food and the bigger green purchasing behaviour realm has been tackled tirelessly worldwide. The struggle came to narrowing down on specific factors since existing literature looked at the issue multiple variate ways. For the sake of this research, we established the link between expressed satisfaction on purchase attributes and latent attitudes. Following this, we had to establish a finite number of ‘drivers’ for organic food consumption. This came harder since comparable attributes rose in literature under different names.

After having identified drivers and having built the backbone of our conceptual framework adapted from the research by Rana, J., & Paul, J. (2012), we had to answer questions about the relationships among the branches of the conceptual tree. Doing so required looking at the literature covered in the reviews as well as branching out. For the effect of drivers on organic purchasing behaviour (the 2<sup>nd</sup> theoretical question) the reviews and little branching out was sufficient to build an answer. On the other hand, for



the specific effects of age and gender on the importance of each specific driver the case was different. As mentioned in the introduction chapter, this relationship is not directly studied extensively in organic food literature, therefore we looked at literature on gender and age moderation roles on green purchase behaviour as well as food purchasing behaviour.

**2.6.2 Hypothesis and conceptual framework**

The past literature allowed us to reach the following hypothesis as well as building the conceptual framework tree in which they play a role.

- H1: *The satisfaction importance mix is a good descriptor of purchase intent.*
- H2: *The main drivers of organic food purchase behaviour are either psychographic or product related.*
- H3.a: *Health concerns play the greatest role amongst psychographics in organic food purchase intention.*
- H3.b: *Price satisfaction has a significant effect on overall satisfaction of organic food purchase.*
- H3.c: *Eco-labelling perceptions together with quality drivers have a significant effect on purchase satisfaction.*
- H4.a: *Male driver weights are relatively higher for social pressure, and product perceived quality, freshness and taste.*
- H4.b: *Female driver weights are relatively higher for environmental and health concerns, as well as price.*
- H5.a: *Older generation driver weights are higher for environmental concern and social pressures.*
- H5.b: *Younger generation driver weights are higher for egoistic components: health concern, price and quality.*

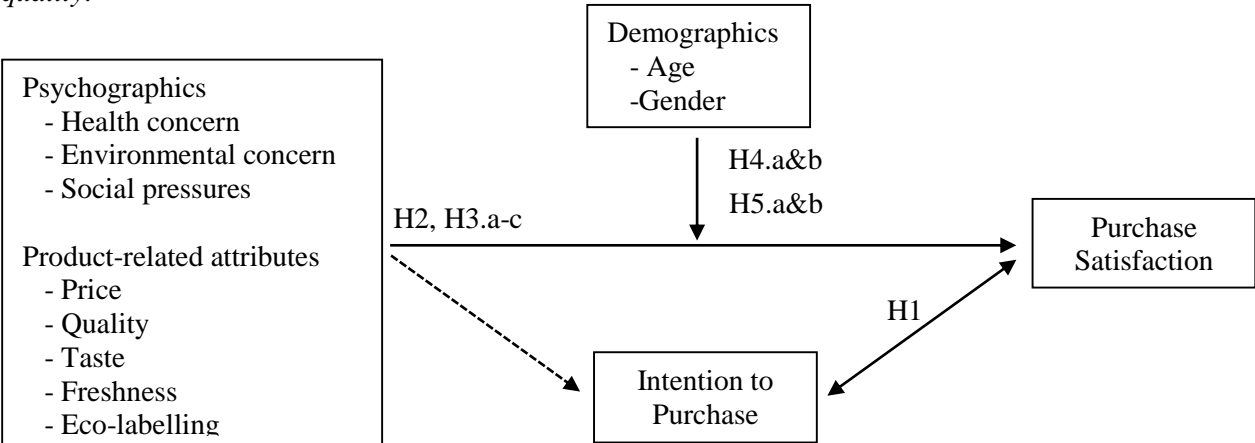


Figure 3 Finalized conceptual framework adapted from inspirational article by Paul and Rana (2012)  
 Notes: This adapted framework displays the theorized relationship of psychographics and product-related attributes to stated satisfaction and how this is translated to intention to purchase, as well as the role gender and age play in moderating said relationship. Each hypothesis is displayed along the respective relationship line they pertain to.

### **3 Research Methodology**

#### **3.1 Quantitative vs. qualitative**

##### **3.1.1 The difference**

Quantitative studies are characterized by the use of numerical data and statistical manipulation in order to evaluate effects and corroborate hypothesis. To gather such data multiple sources can be used. Examples of such methods are surveys or experiments, as well as data banks for desk research. Desk research being one that does not require to collect data personally but it being readily available. Because of this number base ordeal, researcher bias is dampened and only applies in the collection part, when building the survey questions for example. On the other hand, qualitative studies deal in words and observations of human behaviour. This research is more subjective and interpersonal in nature. It looks at uncovering underlying motivations through the power of deduction of such words and/or behaviours. This type of research tends to be more descriptive and subjective. Moreover, it tends to be of fewer individuals, making its findings very insightful yet less generalizable. While the nuances of qualitative research are extremely valuable, quantitative research tends to be better at analysing broader topics and phenomena. As well as generating results that are generally easier to decipher through statistical methods and replicable by fellow researchers (Creswell, 2008).

##### **3.1.2 The choice**

In the reviews I have come across for this study, as well as the research I have individually looked at to develop my hypothesis show an overwhelming preference in quantitative research. This is expected as they deal in topic that needs to be generalizable to the wider population to provide the prospect of applications and as Creswell (2008) outlines quantitative research is the answer to this goal. Moreover, these studies tend to treat in multiple variables that are easily measured and therefore renders the benefit of qualitative research null. Said benefit being the power of qualitative research to deal in the unquantifiable.

In this research specifically we want to uncover the main drivers for purchasing organic food, which we predicted being driven by multiple factors across the board. Because all these drivers will likely play significant roles but to different extents, we need measurable data to perform analysis on and assess the hypothesis. In conclusion, we will follow the trend of existing literature in topic and try and answer our questions through statistical analysis performed on data collected via survey.

#### **3.2 Data collection**

As stated, our choice of collection is a survey; a survey that was built on the instruction of the survey conducted by the article by Paul, J., & Rana, J. (2012) that this research draws inspiration from. This is done because of the replication of said research that will be performed in the first part of the analysis, followed then by original input. This survey is built on the premise stated vs. revealed preferences. The respondents are asked demographic questions for gender and age, the moderating variables mentioned

in the conceptual framework. After this they are asked questions about their satisfaction on specific components of their organic purchase, at the end they are asked their satisfaction with the purchase as a whole. Satisfaction is evaluated on a Likert scale from 1 to 5, like in the inspirational article. Also following the indications of the inspirational article, but more importantly following survey building norm, the questions for each attribute are more than one. Specifically, there is 3 questions for psychographics and eco-labelling, 2 questions for price and quality drivers and finally 3 questions for overall satisfaction. The questions for overall satisfaction include 2 for satisfaction and one for future purchasing intent, which thanks to our argumentation in Chapter 2 we can use synonymously. Finally, the main body of 20 questions on the attributes is administered on a random order. This is done in order to avoid response bias. After the required process of agglomerating the answers with due weights, from the data one can infer which attributes play the bigger roles in affecting the final satisfaction, hence revealing preferences that the individuals themselves might not be aware of.

This final survey was achieved after pilot testing the afternoon before collection started. An initial survey was administered and from the conversations had with the respondents, adjustments were made. Namely, the Likert scale used to be worded rather than number, this confused respondents as in 5-point Likert the 'jumps' tend to be too harsh, as well as being better for the accuracy of the data when treating as a number in the analysis. Wording of some of the questions was also changed for clarity, specifically the social pressure questions which tended to be confusing.

With the Dutch market for organic food at 1.44 billion euros in 2022 and ever growing (IFOAM Organics Europe, 2024) the survey was conducted in Rotterdam. Alike the inspirational study by Paul, J., & Rana, J. (2012) conducted in Delhi to study the Indian market, a major city in the country of focus. It was collected in person, both on my personal device and via a QR code, which allowed more people to be surveyed at once, as well as surveying both members of a couple shopping together. The data aims to unveil the purchasing behaviour of current organic buyers, therefore, Conducting the survey outside a green produce store in Rotterdam was chosen to target regular organic shoppers, ensuring the relevance of the sample to the research objectives. Likewise, the choice of doing in person survey stems from the availability of regular organic food shoppers. The sample of reachable organic shoppers across all ages is limited. (See the Appendix for the complete survey)

### **3.3 Summary statistics**

From a qualitative and completely unsubstantiated standpoint, the population shopping at the green store I selected for my data collection was quite varied. There seemed to be a good mix of both ages and genders. Moreover, the population that shops at such a place seemed to be nicer than the average, which made data collection easier than expected. Post-survey conversations, conducted to avoid influencing responses, were both insightful and motivational. The people I interacted with appeared very engaged in the topic themselves and wished the best for the research as they understood its root goal: promote organic food consumption. It is from this purely visual assumption that I can say the spread of men and

women shopping at the store was even, however this is not reflected in the data collected. Women's response rate was at 62.9% against men's 37.1%, therefore seeing 95 women responses against men's 56 (Table 1).

The spread for age is also quite uniform, as expected the response rate lowers as the age is higher purely due to language barriers. The survey was administered in English, even though adding an option for Dutch language survey was pondered, a decision was made to avoid biases due to translations, where a question might be consistently answered differently in a different language. Overall, while collection for older people was more difficult the age spread is adequate featuring a mean of 42.56 years and a standard deviation of 14.92.

Finally, because of the QR handing out in front of the store it occurred 5 times in the data that respondents answered 'NO' to the first prompt. This being a filtering out question on whether the respondent engaged in organic food consumption. Because of this, the official responses to the survey were 156 but only 151 were administered the following questions and all of them were completed fully, thereby not requiring any further 'cleaning' of the data.

Table 1: *Descriptive statistics of age and gender*

Demographic	Category	Frequency	Share (%)
Sex	Male (=0)	56	37.09
	Female (=1)	95	62.91
Age Group	20-29	34	22.52
	30-39	43	28.48
	40-49	24	15.89
	50-59	25	16.56
	60-69	19	12.58
	70-80	6	3.97
Total	Total	151	100

### 3.4 Data analysis

The data we have collected will be used to replicate part of the analysis done by Paul, J., & Rana, J. (2012) with the STATA statistics engine as well as a minor contribution of SPSS software. SPSS was required due to a statistical tool not being available on STATA. That is to perform a regression of all drivers on overall satisfaction to get an initial feel of the consumer importances. A factor analysis is then performed on our drivers of organic consumption. This will allow to reduce the data and uncover fewer (2 like the original article, or more) unidentified factors that affect organic purchasing behaviour. The factor analysis will also be performed like in the inspirational article, by the Principal Component Analysis (PCA) method.

Once the main factors are identified a simple regression can be performed with the factors on overall satisfaction. This will allow us to make the first inferences. Understanding to what extent group of drivers affect organic purchasing behaviour on the total sample.

With the factors and the explanatory power of the regression analysis on the total population evaluated we can perform the differentiating part of this research, namely the moderating role of demographics and age. To understand how gender and age affect the drivers of organic purchase behaviour we can perform an interaction analysis for each of the demographics. Regressing satisfaction with the factors and the interaction of the gender (0=female, 1=male) and age (years). For example, for 2 factors found and age interaction, the regression formula would look like the following.

$$PS = \beta_0 + \beta_1 F_1 + \beta_2 F_2 + \beta_3 age + \beta_4 (F_1 \times age) + \beta_5 (F_2 \times age)$$

This formula will help us answering our final empirical question and uncover age and gender differences in attitudes towards organic food drivers.

### **3.5 Possible research bias**

Firstly, the data is not a representative sample of the population, since collected in a niche environment that more likely than not attracts a specific type of costumer. However, the research is specifically targeted at organic consumers and the main scope is to understand whether different ages and genders have significantly different drivers towards organic purchasing. Thus, the non-representativeness of the population is not a major concern for this research. Another problem would be the response bias that comes along with in person research. The survey is designed to be quick to answer as to assure that respondents will not 'bore out' into answering questions rashly and/or untruthfully, as well as being explicitly anonymous so that social pressures do not affect respondents' answers.

## 4 Research Outcome

To be able to have a flow to the statistical analysis and what it tells us about the sampled population we will use the empirical sub questions as sub chapters. However, the very first thing we have to look at is the replication of the simple regression performed by Paul and Rana (2012) in their quantitative research. This regression aims at giving us an initial idea of how drivers and overall satisfaction interact, namely, addressing hypothesis 3 (a-c). That is a regression on overall satisfaction of all the stated satisfaction of drivers identified in the literature review and asked in the survey after being aggregated with due weights.

$$\text{Overall} = 0.799 + 0.210\text{Env} + 0.148\text{Hea} - 0.014\text{Soc} + 0.046\text{Pri} + 0.244\text{Qua} + 0.169\text{Tas} \\ - 0.013\text{Fre} + 0.062\text{Lab} + \varepsilon$$

Table 2: Regression results

Model	Coefficients	Standard Error	Model Information	
<b>Constant</b>	0.799***	0.278	<b>Observations</b>	151
<b>Environment</b>	0.210***	0.062	<b>Prob &gt; F</b>	0.000
<b>Health</b>	0.148**	0.069	<b>R-squared</b>	0.588
<b>Social</b>	-0.014	0.056		
<b>Price</b>	0.046	0.040		
<b>Quality</b>	0.244***	0.068		
<b>Taste</b>	0.169***	0.060		
<b>Freshness</b>	-0.013	0.054		
<b>Labelling</b>	0.062	0.057		

Notes: The above results are obtained through an OLS linear regression. The dependent variable overall satisfaction, measured on a scale from 1 to 5. Both the coefficients and the standard errors are rounded off to three decimal places. The significance stars indicate the significance level; \* p<0.10, \*\* p<0.05, \*\*\*p<0.01.

This regression shows both promising and less promising signs. Firstly, not all drivers seem to be statistically significant. In fact, the model cannot statistically prove that the importance of Social Pressures, Price, Freshness and Labelling to be different from zero. However, the overall model has very good explanatory power with an R-squared<sup>3</sup> (R<sup>2</sup>) of .588. This implies that it is able to explain almost 60% of the variance present in the responses for overall satisfaction. Moreover, 4 of the 8 drivers are found statistically significant with 3 of them being significant even at an alpha of .01. This corroborates Hypothesis 2, stating that purchase satisfaction is affected both by psychographics and product related

<sup>3</sup> R<sup>2</sup> is a statistical measure for the goodness of fit of a model. It measures the proportion of variance in the y-axis explained by changes in the x-axis. In the context of our regression analysis, it measures the proportion of variance of the response variable explained by the regressors.

attributes, as well as partially fitting hypothesis 3. H3a is very clear cut where the coefficient (weight of attribute on overall satisfaction) of ‘environment’ is considerably higher than that of health as well as social awareness which is not even proven to be different from zero, thereby partially contradicting the hypothesised greater role of health. On the other hand, H3b is not proven since price’s coefficient is not statistically significant. Even though most of its 95% confidence interval lies outside of zero [-0.034, 0.125], it didn’t cut the .10 p-value mark for significance. Somewhat similar is the case for Eco-labelling for hypothesis H3c, nevertheless quality and taste are significant at  $>.01$ , highlighting how product related attributes of quality have a great impact on overall satisfaction. In fact, they feature similar importance levels (coefficients) to environmental and health concerns.

#### **4.1 What are the underlying factor weights of organic food purchase satisfaction among Rotterdam organic consumers?**

The first regression allowed us to assess H2 and H3, mainly looking at the importance of each driver on overall satisfaction. We can now replicate the factor analysis done in the article by Paul and Rana (2012). The purpose of this is not purely for the sake of replication alone, it is indeed a two-fold reasoning. Firstly, it allows to reduce all drivers to fewer unidentified factors to which names/descriptions can be given. Secondly, this reduction to 2 or 3 underlying factors will then allow us to perform our moderation analysis in the following step of the chapter, as an interaction effect on each of the individual drivers would be lengthy and hardly produce significant and interpretable outcomes.

The initial step of a Principal Component Analysis (PCA) to identify factors is to first assess whether there exist factors to be found. This is done by performing two tests: Kaiser-Meyer-Olkin (KMO) and Barlett’s tests. The first one tests on a scale from 1 to 0 how much variance amongst the various attributes is ‘common’ variance, thereby explainable by an underlying factor. The closer the value is to 1 and the more adequate the sample is for conducting a factor analysis. On the other hand, Barlett’s test of sphericity tests the null hypothesis that the correlation matrix of the attributes is an identity matrix, meaning the attribute are unrelated. Therefore, a test the yields a p-value close to zero allows us to reject the  $H_0$  and suggests the existence of underlying factors. This part of the analysis was the only one performed on the software SPSS instead of STATA, as on the latter it would have required the installation of an extension.

Table 3: *PCA factor analysis adequacy tests*

<b>KMO</b>	Sampling adequacy	0.823
<b>Barlett’s Test of Sphericity</b>	Approximated Chi-Square	402.603
	Degrees of Freedom	28
	Significance	< 0.001

Table 3 unequivocally confirms the need for a factor analysis. It features a KMO score of .823 while the rule of thumb on the matter states that any score above .800 is an almost perfect fit. Similarly, the p-value of the Barlet’s test is far below the level of significance of .05. When performing these tests on SPSS, the software automatically yields communality scores for the drivers, these are scores from 1 to 0 on the amount of variance they have in ‘common’ with underlying factors. Once again this comes with a rule of thumb: scores below .4 warrant a decision to be made about the removal of such attribute from the following factor analysis. The only driver with such a score in this research is social awareness with a score of .365. Because social awareness importance on overall satisfaction was already found to be not significantly different from zero in the previous model and its communality score being so low, the decision to remove the driver from the following analysis was made (see Appendix B for the full communalities table).

We now run the PCA on STATA with only 7 factors, this yields table 4. From this table it is to be decided how many underlying factors to use for the remainder of the analysis. There are multiple rules of thumb for this too. One is to look at the eigenvalues (extra variance explained by the extra component) these are generally required to be above 1.000. Moreover, we can look at the cumulative figure which explains how much of the original variance is retained by eventual factors chose. Generally, we want to achieve score above 60% in this field. Because the eigenvalue of component 2 is very close to 1 and it helps us achieve an overall variance explained of about 65% the chose number of factors are 2 out of the possible 7.

Table 4: *Total variance explained, PCA extraction method. STATA*

<b>Component</b>	<b>Eigenvalue</b>	<b>Cumulative</b>	<b>Extraction Information</b>	
<b>1</b>	3.546	0.507	<b>Observations</b>	151
<b>2</b>	0.992	0.648	<b>Number of</b>	7
<b>3</b>	0.744	0.755	<b>components</b>	
<b>4</b>	0.598	0.840		
<b>5</b>	0.440	0.903		
<b>6</b>	0.395	0.959		
<b>7</b>	0.285	1.000		

Therefore, using only 2 factors factor loading are generated giving the results in Table 5. In it the greater loading of each attribute on either factor is underlined since this number explains how much variance in the attribute is explained by each factor. This in turn will allow us to describe the nature of each factor.

*Factor 1:* includes mainly egoistic motives: health benefits of foods as well as all the product quality drivers. These are all drivers that affect the individual rather than society.



*Factor 2:* is described mainly by altruistic drivers: environment benefits of organic foods and eco-labelling, arguably connected since the questions on eco-labelling looked at trust and informative power on the product. From our qualitative conversations with respondents, it can be argued that price might also be an altruistic motive since many expressed high dissatisfactions with the price premium for organic foods which renders them inaccessible for the wider population. Regardless, price as a reasonably lower loading on this factor than the other 2.

Table 5: *Rotated factor loadings, PCA extraction method. STATA*

	<b>Factor</b>	
	<b>1</b>	<b>2</b>
<b>Environment</b>	0.324	<u>0.636</u>
<b>Health</b>	<u>0.615</u>	0.310
<b>Price</b>	0.244	<u>0.466</u>
<b>Quality</b>	<u>0.705</u>	0.296
<b>Taste</b>	<u>0.686</u>	0.256
<b>Freshness</b>	<u>0.604</u>	0.302
<b>Labelling</b>	0.251	<u>0.731</u>

Finally, a regression on overall satisfaction can be performed for these 2 factors to assess its explanatory power and the relative importances of each factor on the overall satisfaction. In Table 6 are the results of such analysis which are more clear-cut than the first regression performed in table 1. Comparatively, this regression managed to retain explanatory power on the variance of overall satisfaction with  $R^2$  score of .560, while the one of the original regressions is .588. Moreover, the coefficients are all highly significant at  $>.01$ , thereby, allowing us to infer assigned importances to each factor on the overall satisfaction scores. Here the importance of factor 1 is reasonably higher than the one on factor 2, highlighting a keener focus on egoistic drivers by the sampled population.

Table 6: *Regression of factors 1 and 2, results*

<b>Model</b>	<b>Coefficients</b>	<b>Standard Error</b>	<b>Model Information</b>	
<b>Constant</b>	4.344***	0.034	<b>Observations</b>	151
<b>Factor 1</b>	0.404***	0.043	<b>Prob &gt; F</b>	0.000
<b>Factor 2</b>	0.308***	0.046	<b>R-squared</b>	0.560

Notes: The above results are obtained through an OLS linear regression. The dependent variable overall satisfaction, measured on a scale from 1 to 5. Both the coefficients and the standard errors are rounded off to three decimal places. The significance stars indicate the significance level; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## **4.2 How does age affect the weights of the factors on overall organic food purchase satisfaction?**

Already answering the first empirical question (previous sub-chapter), we have strayed away from the inspirational article analysis replication. This was the case because here we included psychographics and product variables in the factor analysis, while in the original research only product variables were included. Nevertheless, the truly original part of this research starts here, where we use the work done so far to see demographical moderating roles on the 2 identified factors.

The first interaction effect we will look at is the role of age. A regression in the form of the one described in chapter 2 will be employed. For this in the data two new columns of entries were introduced, that is the values resulting from the multiplication of age with factor 1 and 2, respectively.

After this data manipulation the regression is performed, of which the results are shown in Table 7. First thing to notice is the added explained variance of this model, while small the  $R^2$  changed from .560 in table 6 to .577 in table 7.

Here we see how factor 1 loses statistical significance while the interaction term between factor 1 and age has a significant level  $>.10$ . This allows us to infer that the effect of Factor 1 on overall satisfaction is substantially moderated by age. That is that every increment of age is found to significantly increase the importance of Factor 1. Contrarily, Factor 2 does not seem to be affected by age effects. Every increment of age has not statistically been found to cause an effect on the importance of Factor 2 significantly different from zero. This is also shown by the fact that Factor 2 retained stand-alone statistical significance. Age on its own is a statistically significant predictor of overall satisfaction meaning that age increments tend to increase overall satisfaction on their own, inferring older people might be more accommodating when it comes to judge organic foods.

This regression also partially answers hypothesis 5. H5b is rejected by our analysis. While the distinction between egoistic and altruistic drivers is perfectly captured by the observed factors the hypothesis is opposite to the found results. That is egoistic drivers are increasingly explanatory of overall satisfaction as ages progress. While contradicting with the hypothesis I got to through my literature review, it does not contradict all literature. As covered in my argumentation of H5b, some research did support younger generations being more socially aware and proactive, focussing on altruistic drivers for green consumption relatively more (Casalegno et al. 2022). However, I had decided the volume of the research in the other direction suggested stronger chances of it being true.

The complementary hypothesis H5a has not been found neither true nor false as we do not have statistical evidence to claim either. Therefore, we have to settle on the idea that age is not found to affect

altruistic drivers. The change in variance explained by the model, the  $R^2$  figure, is increased by only .018, meaning it added less than 2% explanatory power of the variance seen in overall satisfaction.

Table 7: *Interaction regression of factors 1 and 2 with age, results*

<b>Model</b>	<b>Coefficients</b>	<b>Standard Error</b>	<b>Model Information</b>	
<b>Constant</b>	4.162***	0.108	<b>Observations</b>	151
<b>Factor 1</b>	0.185	0.130	<b>Prob &gt; F</b>	0.000
<b>Factor 2</b>	0.288**	0.135	<b>R-squared</b>	0.577
<b>Age</b>	0.00417*	0.00239		
<b>Factor 1*Age</b>	0.00460*	0.00267		
<b>Factor 2*Age</b>	-0.00017	0.00301		

Notes: The above results are obtained through an OLS linear regression. The dependent variable overall satisfaction, measured on a scale from 1 to 5. Both the coefficients and the standard errors are rounded off to three decimal places, with exception to those regarding including age which are rounded to 5 decimal places (age is calculated in very small increments and the extra decimal places add nuance). The significance stars indicate the significance level; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### 4.3 How does gender affect the weights of the factors on overall organic food purchase satisfaction?

A specular model for the one used for age is now used for gender in order to identify their effects on overall satisfaction of organic food. For these 2 extra columns in the data also had to be generated with the results of the multiplication between the Boolean gender variable, 0 for males or 1 for females, and factor 1 and 2 figures respectively.

The results of the interaction regression with age are displayed in Table 8. Notable to mention the similarity of this regression to the regression in Table 6 without interaction effects. The explained variance,  $R^2$  figure, is negligibly different from the simpler model both rounding at .560 with three decimal places. Alike is the argument for the only three statistically significant figures, namely, the constant and the coefficients of factor 1 and 2. All featuring negligible differences in sizes. Following this argument, it is evident that all gender effects are statistically not different from zero. From this we can deduce that gender did not have an effect on the sampled population's organic purchase drivers. This therefore rejects both hypotheses H4a and H4b not in the sense that we found opposing evidence but rather that no evidence on any effect of gender on the drivers for organic food is found.

Table 8: *Interaction regression of factors 1 and 2 with gender, results*

<b>Model</b>	<b>Coefficients</b>	<b>Standard Error</b>	<b>Model Information</b>	
<b>Constant</b>	4.350***	0.057	<b>Observations</b>	151
<b>Factor 1</b>	0.417***	0.064	<b>Prob &gt; F</b>	0.000
<b>Factor 2</b>	0.285***	0.081	<b>R-squared</b>	0.560
<b>Gender</b>	-0.008	0.072		
<b>Factor 1*Gender</b>	-0.018	0.091		
<b>Factor 2*Gender</b>	0.034	0.099		

Notes: The above results are obtained through an OLS linear regression. The dependent variable overall satisfaction, measured on a scale from 1 to 5. Both the coefficients and the standard errors are rounded off to three decimal places. The significance stars indicate the significance level; \* p<0.10, \*\* p<0.05, \*\*\*p<0.01.

#### 4.4 Summary of research

This analysis consisted of 5 main steps. We started off with a regression of all studied drivers. In it we were able to find significant results for 4 of the 8 analysed. Such are Environment, health, quality and taste whose coefficients can be interpreted as weights of importance given to said attributes on the final satisfaction of their organic purchase. This result substantiates H2 and partially substantiates the hypothesis in 3. H3a hypothesised the greatest role in psychographics to be played by the health component while the results show a greater role played by environment component, yet social pressures remain last. H3b did not yield significant results, since we could not conclude significantly different from 0 effects of price on satisfaction of the purchase. Finally, H3c also partially substantiated since 2 of 3 quality drivers have been found to play significant effects on overall satisfaction, comparable to those of environment and health.

The second step of the analysis was to identify possible underlying factors that could ‘group’ drivers into categories and simplify the data for analysis. This was extremely successful since the resulting 2 factors paint a very clear picture. Factor 1 can be described as the egoistic motives, having the highest loadings among health benefits and quality drivers. Consequently. Factor 2 can be described as altruistic motives, featuring the highest loadings in environment concern and eco-labelling, with a relatively higher than Factor 1 but less sizable loading for price.

Steps 3 to 5 then performed 3 regressions with these identified factors, and their interaction effects with age and gender respectively. The first regression without interactions yielded results that suggest a relative higher importance given to Factor 1, namely the egoistic motives as well as not decreasing the explanatory power of the model greatly from the original regression. The change in variance explained by the model, the R<sup>2</sup> figure, is decreased by only less than 3%. This first regression without interactions also helps to better analyse the following with interactions.

The first interaction regression with age yielded positive significant effects on the importance of Factor 1 with age, meaning the older ages tend to gradually lay more importance on egoistic component of their purchase. While age was not found to play a role on the importance levels of altruistic factors. Thereby, being inconclusive for H5a but reversing the hypothesised H5b. This is not as much of a shock since literature was conflicting on the age difference in the importance of egoistic drivers, and the choice to hypothesise that egoistic drivers would be more important for the younger population was, while substantiated by evidence, still a speculative decision. On the other hand, the interaction regression with gender conclusively rejected both hypothesis on the effects of gender on the motivation weights for the satisfaction of organic food purchases. Yielding p-values, for the null hypothesis of no effects, of .913, .842 and .735 for age and its interaction with factor 1 and 2, respectively. All regressions performed from step 1 to 5 retained explanatory power of variance scores between 55 and 60 percent, which means we did not lose explained variance as we simplified the model with the factorisation of its components.

## **5 Conclusions and Recommendations**

We now finally approach the concluding chapter of this research. The study took us on a journey that started from the goal of understanding what the motivations of people are for buy organic food. Building upon the work by Paul and Rana (2012), it was decided Rotterdam landscape, unlike their work which focused on the developing economy of India. Another goal of the research that we looked into was to add nuances to the existing literature, one that going through we realised was hinting at demographical differences in motivation weightage for organic food purchases yet did not give clear-cut answers about.

We therefore developed a theoretical framework to guide us towards an answer to this question. This theoretical framework itself is an adapted version of the one by Paul and Rana (2012), to which ‘tree connections’ were substantiated by the extensive literature in the field. This allowed us to develop several hypotheses on the transition from the replication of the inspirational article to the moderation effects of age and gender on the underlying factors of organic purchase satisfaction.

The following sub-sections pool together said findings, both theoretical and empirical. Looking where this overlap, contradict or are undefined. Finally, we can argument the possible implications of this research into the real world as well as how it could be expanded in future investigations.

### **5.1 Literature’s key findings**

As expressed in the theoretical framework chapter, existing research in the field is very extensive and allowed us to have several studies to answer the same theoretical sub-questions. We looked both at in depth reviews of all literature as well as nit picking specific research to argument specific aspects of hypothesis.

Both the work by Paul and Rana (2012) and Tudoran et al. (2012) allowed us to connect the concepts of purchase satisfaction and purchase intent. This helps both with the survey building, increasing the possibility of questions to be asked without being repetitive as well as draw applicable conclusions from our satisfaction data. The existing literature, then, allowed us to make hypothesis on key interactions of attributes and final satisfaction of the organic purchase.

We tested 8 drivers from the literature we expected to have statistically significant effects on overall satisfaction. Such are the psychographic environmental concern, health concern and social pressure, and the product-related price, quality, taste, freshness, and eco-labelling. As well as theorised that the biggest impact would be played by health in the psychographic category. Following this we looked mainly at literature on green purchasing behaviour to theorize the effects that gender and age would play in the importances people assign to such attributes. This was done due to the lack of a direct link between demographics and importance portfolios within organic food purchase research. The literature reviewed lead us to the conclusion that males would be more hedonistic in nature, putting greater emphasis on the

importance of quality drivers as well as social pressures (how people view their behaviour). Consequently, females are expected to lay relative higher importance on environmental and health concerns as well as being more mindful of prices. We were able to theorise hypothesis for the role of age in this interaction, where younger generations are expected to be relatively more affected by egoistic drivers, which is health concern as well as price and quality indicators. Accordingly, opposite is the case for the older portion of the population, laying relative higher importance on altruistic components, environmental concerns, and social pressures.

## **5.2 Research's key findings**

In the empirical portion of this research, we were able to answer many of the posed questions. Firstly, we identified 4 out of 8 drivers that played significant roles on the overall satisfaction of the purchase. Such are environmental concern, health concern, quality, and taste. With environmental concern playing a comparatively greater role than health. Similar are the weights given to quality and taste, indicating that together they play as big a role as their psychographic counterparts.

The factorisation yielded 2 underlying factors that could explain about 65% of the variance of their components. As well as retaining explanatory power of the variance seen in overall satisfaction when regressed. These factors can be described via their loading scores, painting a neat picture. Factor 1 appears to be driven by egoistic motives having high loadings for both health concern and all the quality drivers. Specularly Factor 2 seems to be driven by altruistic motives with high loadings for environmental concern and eco-labelling. Factor 2 also has a low loading for price, yet still higher than the loading price has on Factor 1. This shows a slight correlation between giving more importance to price and altruistic motives, such environmental concern and eco-labelling.

The regressions, which followed the factorisation, featured also the interaction effects of age and gender. The first regression without interactions yielded highly significant results showing the egoistic motives playing greater role on the overall satisfaction, yet both playing a sizable one. When adding the interaction of age, it is seen that it plays a role in moderating the effect of Factor 1 significantly but does not show a significant effect on Factor 2. This effect can be worded as the sampled population laying increasingly more importance on egoistic drivers as they get older. As well as being found that age on its own plays a positive role on overall satisfaction, indicating the older sampled population seems to be more content with their organic purchases than the younger one. The interaction with factor 2 features a p-value of .954 for the null hypothesis of no effect, strengthening the claim of no effect on altruistic motive with age differences. Finally, the second interaction was performed displaying very high p-values for all interaction effects. It can be drawn for this that there are no evident effects of gender in the motivations of organic food purchases in the sampled population.

### **5.3 Findings comparison**

Following the order in which they are presented in this paper, we will look at how the hypothesised literature backed connections, compare with the findings in or empirical research. Starting from the theorised 8 drivers that would play a role in explaining the overall satisfaction only 4 have been found to have statistically significant importance on people satisfaction with their purchase. We also find environment to play a greater role than health concern, thereby going against the literature backed claim that health would be the greatest psychographic factor, yet both are greater than social pressures as theorised. The factorisation yielded factors that fit very well the distinction between egoistic and altruistic drivers which was also argued in existing literature when analysing the effects of gender and age interactions. Yet, we disregarded social pressures as being connected to any of the drivers, due to very low communality scores. Contrarily, in the literature it was talked about alongside.

When introducing gender and age interactions the literature and research findings conflict the most. Age is indeed found to play a moderating role as expected from the literature. The sampled population was found to become progressively more egoistic in nature as age progresses, yet the theorised effects are the inverse. However, the literature was conflicting on the topic and therefore we find this contradiction with our hypothesised result to be a reasonable and unworrying one. The gender interaction is altogether a different case. Our findings yielded clear evidence of no effect of gender in moderating the drivers of organic food satisfaction, both adding no explanatory power to the model and featuring high p-values for the null hypothesis. This, therefore, rejects the theorised male hedonistic nature and female altruistic and price conscious one, which was greatly backed by the literature in the field of green purchasing behaviour.

### **5.4 The central answer and hypothesis corroboration**

The extensive work so far can finally culminate by answering the central research question posed in the introductory chapter.

*“How is the portfolio of drivers for organic food purchase satisfaction affected by age and gender?”*

An original portfolio made by the two factors, identified mainly by the distinction of altruistic and egoistic drivers is found. Such portfolio has been found in this research to be significantly affected by age but not by gender. In fact, age significantly affects the egoistic factor 1 while not affecting factor 2. This changes the balance of importances that the sampled population assigns to different attributes of organic food towards their purchase satisfaction. The population being found to retain importance of altruistic drivers, yet becoming increasingly more affected by egoistic drivers the older the person is.



On the other hand, gender has been found to not play a role in changing the importances people give to either altruistic or egoistic factors, showing uniformity among the two sexes in what drives their purchase satisfaction the most.

This conclusion was reached after extensive work on testing the hypothesis posed in theoretical framework, the backbone of the research. We now therefore either accept or reject the hypothesis we tested which are presented below:

*H2: The main drivers of organic food purchase behaviour are either psychographic or product related.*

*H3.a: Health concerns play the greatest role amongst psychographics in organic food purchase intention.*

*H3.b: Price satisfaction has a significant effect on overall satisfaction of organic food purchase.*

*H3.c: Eco-labelling perceptions together with quality drivers have a significant effect on purchase satisfaction.*

*H4.a: Male driver weights are relatively higher for social pressure, and product perceived quality, freshness and taste.*

*H4.b: Female driver weights are relatively higher for environmental and health concerns, as well as price.*

*H5.a: Older generation driver weights are higher for environmental concern and social pressures.*

*H5.b: Younger generation driver weights are higher for egoistic components: health concern, price, and quality.*

Our empirical findings indicate the acceptance of H2. According to our research 4 of the 8 identified drivers play a significant role on overall satisfaction of the organic food purchase. Of these, two are the psychographic environmental and health concerns and the other two are the product-related quality and taste. The magnitude of these effects in turn answers H3a-c. H3a is rejected and reversed, environment being found playing a greater role on purchase satisfaction than health, while both playing a greater one than the third psychographic, social pressure. H3b is rejected since the p-value of price in the first regression is .258, not reaching the >.10 significance level required. H3c is partially accepted, in fact, eco-labelling is not found to play a significant role alike one of the quality drivers, freshness. However, the perceived quality and taste drivers play a significant and, comparatively to psychographics, sizable role on purchase satisfaction.

After factorization, the regressions with the 2 factors on overall satisfaction of organic food purchase and the following interaction regressions with age and gender allows us to answer H4a-b and H5a-b. H4a and b are both categorically rejected and not reversed since the regression yielded very high p-values for both gender and its interactions. This does not only give us no statistical significance to conclude an effect of gender on the motivations of organic food purchase satisfaction, but together with

the unincreased explanatory power of the model, it suggests that no interaction is present in the sampled population. H5a is rejected since in the interaction effect of age with factor 2 (altruistic drivers) the p-value is .954. Such a high p-value together with the retained coefficient of factor 2, between the no interaction regression ( $\beta=.308$ ) and the one with age ( $\beta=.288$ ), suggests that these drivers remain unaffected by age differences. Contrarily, H5b rejected and inversed. Both coefficients of age and its interaction with factor 1 are positive and significant. From this we can infer a correlation between higher ages and greater importance of the egoistic drivers towards organic purchase satisfaction. As well as adding an extra nuanced insight on the role of age itself, showing greater complacency with their purchases the older the person is.

Now that all theoretical questions are answered via their equivalent hypothesis, we can look at answering the empirical sub-questions. Such are:

1. *What are the underlying factor weights of organic food purchase satisfaction among Rotterdam organic consumers?*
2. *How does age affect the weights of the factors on overall organic food purchase satisfaction?*
3. *How does gender affect the weights of the factors on overall organic food purchase satisfaction?*

The underlying factors found are similar to the expected distinction between egoistic and altruistic drivers, respectively factor 1 and 2. The weights of their effect on overall satisfaction of the organic purchase are both significant. We can therefore infer factor 1 having relatively greater weight than factor 2 on organic food purchase satisfaction. This showcases a more egoistic nature of our sampled population and answers our first empirical sub-question. The second sub-question can be answered looking at our first interaction regression with age. This increases the explanatory power of the model as well as significantly changing the weights of factor 1. Factor 1 is not found to be significantly different from zero while its interaction with age is positive and significant, meaning that its weight on overall satisfaction is explained by older people in the sampled population being more motivated by its drivers (egoistic). On the other hand, factor 2 standalone retains its magnitude and significance, while its interaction with age presents a p-value of .954, implying there is no effect of age on the weightage of this factor. Finally, question 3 is a very straightforward answer: gender does not affect the weights of the factors on overall satisfaction. In fact, the coefficients of the factors retained their size and significance, while gender and its interaction all feature very high p-values, as well as having added negligible explanatory power to the model compared to the regression without any interaction terms.

## **5.5 Recommendations to organic food marketers and policymakers**

The main goal of this research was from the very beginning to better understand consumer preferences towards organic food purchases in order to promote its consumption. A consumption that is both pro-individual welfare and pro-social and therefore commendable. In his study, our primary goal was to

explore consumer preferences towards organic food purchases, aiming to promote both individual well-being and societal benefit. Understanding these preferences is crucial to tailor products that meet consumer demands better. Our research highlights that consumers prioritize environmental and health considerations, along with product quality, over social pressures, pricing factors, and eco-labels. Thereby, focussing on improving the image of organic food consumption (social pressures) is not a priority as well it is not required to adjust the price premiums on organic foods, as much as it would be ethical for them to be more accessible for the wider population. However, it is suggested to focus on the informative component of organic food of its benefits for the environment and personal well-being. Hence, our decision not to rule out the eco-labelling driver from the suggestions. Promoting the knowledge on the benefits of organic food is crucial to make use of both the altruistic and egoistic natures of organic costumers. This could be done both through informative and transparent labelling on packages and/or promotional campaigns for awareness of the befits of organic food. Moreover, existing consumers are both very satisfied and very affected by the quality drivers of organic food. Higher quality awareness of organic food products regardless of its psychographic component could promote organic food consumption by overcoming the deterring effect of the price premium. Finally, an interaction has been found between age and egoistic drivers, namely, health and quality. This could help targeting of both younger and older consumers by not wasting resources promoting the health benefits of organic food with the younger generations, who care relatively more about the altruistic component. And vice versa for the older generations.

## **5.6 Research limitation and future research prospects**

The limitations of this research which could be tackled by future research mainly lay in the resources available for data collection. While it would have been ideal to conduct more extensive data collection over a wider geographical area. As a student, I did not have the resources to make this a reality. More data points and a more representative sample of the organic consumer population would have allowed for more accurate insights of the general population, rather than the specific sample. I believe for example that all the drivers studied in this research are predictors of overall satisfaction as existing literature suggests, however, the limited data sample allowed for only the main ones to shine through. More resources would also have allowed to extend the survey, currently of 5-minute expected completion time, in order to add more socio-demographics as well as more questions for each driver to add redundancy.

Another limitation I have identified once getting to the data analysis was the scale on which overall satisfaction was measured. While I believe a 5-point Likert scale for the drivers was sufficient, for the overall satisfaction on the purchase more scale points could have added value to the data. This is the case because these customers tended to be highly satisfied, showcasing little variance in the very high end of the 5-point spectrum, making the jump from '4' to '5' too large. More scale points could have

improved the explanatory power of the models by adding more precise measurements of stated satisfactions.

Finally, I believe that the same methodology can be applied for other socio-demographics, for example household size. In the literature, it is a common recurrence to link household size with a greater focus on the health component in green purchases. Another example would be income, showing how greater levels of income might make individuals assign less importance on the price driver of organic foods, as they are less sensitive to the price premium. While these are two examples of many sociodemographic that are correlated with age and therefore partially captured by the model, directly testing them could add nuance and consumer targeting value to the research.

## **5.7 Reflection**

The experience of writing this thesis was both frightening and insightful. Unlike in past projects when I could focus on my own best assets and rely on my teammate's strengths for my limitations, in this project I was responsible for all victories and losses. I developed my writing skills as well as my research skills by having to apply the knowledge gathered these three years on my own. But most of all I tackled the experience of collecting data in person for the first time, which required courage to stop countless people a day as well as fortes in the face of rejection. The data collection was my favourite part of this journey as it sparked many interesting conversations with all kinds of people, from professors at Erasmus University itself that shopped for organic food, to young couples, to expats and Dutch retirees. I incorporated many of the views expressed by these people into my own thought and had them in the back of my mind when writing the research. At times I made qualitative claims from the data collection experience and conversations I entertained, while not truly usable in this research due to its quantitative design, I believe it for future research to be of great value to study the topic from a qualitative perspective. Finally, I regret not giving myself enough time for data collection. If I had not been under a time constraint, I could have gone back to the field right after my data analysis and collect more responses. It would have added greater inductive value to my paper, truly a missed opportunity.

## REFERENCES

- Amirnazmiafshar, E. and Diana, M. (2022) 'A review of the socio-demographic characteristics affecting the demand for different car-sharing operational schemes,' *Transportation Research Interdisciplinary Perspectives*, 14, p. 100616. <https://doi.org/10.1016/j.trip.2022.100616>.
- Apaolaza, V. et al. (2017) 'Organic label's halo effect on sensory and hedonic experience of wine: A pilot study,' *Journal of Sensory Studies*, 32(1). <https://doi.org/10.1111/joss.12243>.
- Bellows, A.C., Alcaraz, G., V. and Hallman, W.K. (2010) 'Gender and food, a study of attitudes in the USA towards organic, local, U.S. grown, and GM-free foods,' *Appetite*, 55(3), pp. 540–550. <https://doi.org/10.1016/j.appet.2010.09.002>.
- Bruschi, V. et al. (2015) 'Consumer Perception of Organic Food in Emerging Markets: Evidence from Saint Petersburg, Russia,' *Agribusiness*, 31(3), pp. 414–432. <https://doi.org/10.1002/agr.21414>.
- Btsa (2024) What makes a food product organic according to European and United States standards. <https://www.btsa.com/en/organic-food-products-standards/>.
- Casalegno, C., Candelo, E. and Santoro, G. (2022) 'Exploring the antecedents of green and sustainable purchase behaviour: A comparison among different generations,' *Psychology & Marketing*, 39(5), pp. 1007–1021. <https://doi.org/10.1002/mar.21637>.
- Creswell, J.W. (2008) *Research design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, Incorporated.
- Dagher, G.K., Itani, O. and Kassar, A.N. (2015) 'The Impact of Environment Concern and Attitude on Green Purchasing Behavior: Gender as The Moderator,' *Contemporary Management Research*, 11(2), pp. 179–206. <https://doi.org/10.7903/cmr.13625>.
- Dangi, N., Gupta, S.K. and Narula, S.A. (2020) 'Consumer buying behaviour and purchase intention of organic food: a conceptual framework,' *Management of Environmental Quality*, 31(6), pp. 1515–1530. <https://doi.org/10.1108/meq-01-2020-0014>.
- Ham, C.-D. et al. (2021) 'Greener than Others? Exploring Generational Differences in Green Purchase Intent,' *International Journal of Market Research*, 64(3), pp. 376–396. <https://doi.org/10.1177/14707853211034108>.
- Hansen, T., Sørensen, M.I. and Eriksen, M.-L.R. (2018) 'How the interplay between consumer motivations and values influences organic food identity and behavior,' *Food Policy*, 74, pp. 39–52. <https://doi.org/10.1016/j.foodpol.2017.11.003>.

- Hansmann, R., Baur, I. and Binder, C.R. (2020) 'Increasing organic food consumption: An integrating model of drivers and barriers,' *Journal of Cleaner Production*, 275, p. 123058. <https://doi.org/10.1016/j.jclepro.2020.123058>.
- Hazaea, S.A. et al. (2022) 'Green Purchasing: Past, Present and Future,' *Sustainability*, 14(9), p. 5008. <https://doi.org/10.3390/su14095008>.
- Hughner, R.S. et al. (2007) 'Who are organic food consumers? A compilation and review of why people purchase organic food,' *Journal of Consumer Behaviour*, 6(2–3), pp. 94–110. <https://doi.org/10.1002/cb.210>.
- IFOAM Organics Europe (2024) Organic in Europe - Browse latest production and market data. <https://www.organicseurope.bio/about-us/organic-in-europe/>.
- Irianto, H. (2015) 'Consumers' attitude and intention towards organic food purchase: An extension of theory of planned behavior in gender perspective,' *International Journal of Management, Economics and Social Sciences*, 4(1), pp. 17–31. <http://ijmess.com/volumes/volume-IV-2015/issue-I-03-2015/full-2.pdf>.
- Janssen, M. and Hamm, U. (2012) 'Product labelling in the market for organic food: Consumer preferences and willingness-to-pay for different organic certification logos,' *Food Quality and Preference*, 25(1), pp. 9–22. <https://doi.org/10.1016/j.foodqual.2011.12.004>.
- Kamenidou, I., Stavrianea, A. and Bara, E.Z. (2020) 'Generational Differences toward Organic Food Behavior: Insights from Five Generational Cohorts,' *Sustainability*, 12(6), p. 2299. <https://doi.org/10.3390/su12062299>.
- Kanchanapibul, M. et al. (2014) 'An empirical investigation of green purchase behaviour among the young generation,' *Journal of Cleaner Production*, 66, pp. 528–536. <https://doi.org/10.1016/j.jclepro.2013.10.062>.
- Katt, F. and Meixner, O. (2020) 'A systematic review of drivers influencing consumer willingness to pay for organic food,' *Trends in Food Science & Technology*, 100, pp. 374–388. <https://doi.org/10.1016/j.tifs.2020.04.029>.
- Lasuin, C.A. and Ng, Y.C. (2014) 'Factors Influencing Green Purchase Intention among University Students,' *jurcon.ums.edu.my* [Preprint]. <https://doi.org/10.51200/mjbe.v1i2.116>.

- Laureti, T. and Benedetti, I. (2018) 'Exploring pro-environmental food purchasing behaviour: An empirical analysis of Italian consumers,' *Journal of Cleaner Production*, 172, pp. 3367–3378. <https://doi.org/10.1016/j.jclepro.2017.11.086>.
- Organic production and products (2024). [https://agriculture.ec.europa.eu/farming/organic-farming/organic-production-and-products\\_en](https://agriculture.ec.europa.eu/farming/organic-farming/organic-production-and-products_en).
- Paul, J. and Rana, J. (2012) 'Consumer behavior and purchase intention for organic food,' *The Journal of Consumer Marketing/Journal of Consumer Marketing*, 29(6), pp. 412–422. <https://doi.org/10.1108/07363761211259223>.
- Rana, J. and Paul, J. (2017) 'Consumer behavior and purchase intention for organic food: A review and research agenda,' *Journal of Retailing and Consumer Services*, 38, pp. 157–165. <https://doi.org/10.1016/j.jretconser.2017.06.004>.
- Shepherd, R., Magnusson, M. and Sjöden, P.-O. (2005) 'Determinants of Consumer Behavior Related to Organic Foods,' *BioOne Complete* [Preprint]. [https://doi.org/10.1579/0044-7447\(2005\)034](https://doi.org/10.1579/0044-7447(2005)034).
- Sierra, J.J., Taute, H.A. and Turri, A.M. (2015) 'Determinants of Intentions to Purchase Unhealthy Food and Beverage Options: A Dual-Process Theoretical Perspective,' *Journal of Food Products Marketing*, 21(5), pp. 503–520. <https://doi.org/10.1080/10454446.2014.885862>.
- Solomon, M.R. (2004) 'Consumer Psychology,' in Elsevier eBooks, pp. 483–492. <https://doi.org/10.1016/b0-12-657410-3/00219-1>.
- Sriwaranun, Y. et al. (2015) 'Consumers' willingness to pay for organic products in Thailand,' *International Journal of Social Economics*, 42(5), pp. 480–510. <https://doi.org/10.1108/ijse-09-2013-0204>.
- Tsakiridou, E. et al. (2008) 'Attitudes and behaviour towards organic products: an exploratory study,' *International Journal of Retail & Distribution Management*, 36(2), pp. 158–175. <https://doi.org/10.1108/09590550810853093>.
- Tudoran, A.A., Olsen, S.O. and Dopico, D.C. (2012) 'Satisfaction strength and intention to purchase a new product,' *Journal of Consumer Behaviour*, 11(5), pp. 391–405. <https://doi.org/10.1002/cb.1384>.
- Ureña, F., Bernabéu, R. and Olmeda, M. (2007) 'Women, men and organic food: differences in their attitudes and willingness to pay. A Spanish case study,' *International Journal of Consumer Studies*, 32(1), pp. 18–26. <https://doi.org/10.1111/j.1470-6431.2007.00637.x>.

## APPENDIX A – Administered survey

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### Start of Block: Default Question Block

Q6 Dear Participant,

Thank you for participating in my survey, which will be used as part of my thesis for my Bachelor's degree at Erasmus School of Economics. We are conducting research to understand consumer satisfaction with their organic food purchases. Your feedback is crucial and will help us gain insights.

**Duration:** The survey will take approximately 5 minutes to complete.

**Confidentiality:** Your responses will be kept anonymous, and no third parties will be notified of your information. The data collected will be used only for academic research purposes. For any questions or concerns contact me at 575981LM@eur.nl.

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Page Break

6 

Q1 Do you purchase organic food products (Bio)?

Yes (0)

No (1)

*Skip To: End of Survey If Do you purchase organic food products (Bio)? = No*

---

Page Break

Q2 How old are you?

---

---

7 

Q3 What is your biological sex?

For the purposes of this study, we are collecting data based on biological sex. We recognize



and respect the distinction between biological sex and gender identity. If this question does not apply to you, we apologize for the limitation in our data collection approach.

Male (0)

Female (1)

---

Page Break

8 JS 9 ↻ 10 X→ 11 X→

Q4 How satisfied are you with...	5 (Extremely satisfied) (5)	4 (4)	3 (Neither) (3)	2 (2)	1 (Extremely dissatisfied) (1)
how organic foods contribute to your overall health? (H1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the impact of organic foods on your physical well-being compared to non-organic foods? (H2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the long-term health benefits of consuming organic foods over conventional foods? (H3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the degree to which buying organic foods reduces your environmental footprint? (E1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the Eco-friendliness of the production methods of your organic food purchase? (E2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
how organic farming practices protect biodiversity compared to conventional farming? (E3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the perception others have seeing you buy organic food? (S1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

how buying organic food communicates a positive image within your social circle? (S2)

how your organic food purchase makes you look in the eyes of others? (S3)

the value for money of the organic foods you purchase? (P1)

the price premium you have to pay for your organic food purchases? (P2)

the quality of your organic purchase? (Q1)

how the quality of organic food compares to non-organic options? (Q2)

how the taste of organic food compares to non-organic options? (T1)

the flavor of your organic food purchase? (T2)

how the  
freshness of  
organic food  
compares to  
non-organic  
options? (F1)

How fresh  
organic food  
products are?  
(F2)

the information  
provided on  
your organic  
food products?  
(L1)

the  
trustworthiness  
of Eco-labels  
on organic  
food products?  
(L2)

what the Eco-  
labels (bio  
symbol) tell  
you about your  
organic  
purchases?  
(L3)



---

Page Break

12  13  14 

Q5 Overall statements

	5 (Extremely satisfied) (5)	4 (4)	3 (Neither) (3)	2 (2)	1 (Extremely dissatisfied) (1)
How satisfied are you with your experience purchasing organic foods? (OVER1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with the organic food products you consume? (OVER2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15  16 

Q11

	5 (Extremely likely) (5)	4 (4)	3 (3)	2 (2)	1 (Extremely unlikely) (1)
How likely are you to continue purchasing organic foods? (OVER3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Default Question Block

## APPENDIX B – Full tables of output, SPSS and STATA

### Descriptive statistics

```
2 . summarize ovrl_avg env_avg hlth_avg soc_avg prc_avg qlty_avg tst_avg frsh_avg
> lbl_avg
```

Variable	Obs	Mean	Std. dev.	Min	Max
ovrl_avg	151	4.344371	.6246981	1	5
env_avg	151	4.15894	.7540846	1	5
hlth_avg	151	4.335541	.6365377	1	5
soc_avg	151	3.304636	.6632584	1	5
prc_avg	151	3.043046	.9728659	1	5
qlty_avg	151	4.211921	.7151622	1	5
tst_avg	151	4.337748	.7671368	1	5
frsh_avg	151	3.897351	.8252634	1	5
lbl_avg	151	3.596026	.8269617	1	5

```
8 . summarize age
```

Variable	Obs	Mean	Std. dev.	Min	Max
age	151	42.55629	14.91649	20	80

```
10 . tabulate gender
```

What is your biological sex?

For the purposes of this study, we are collecting

	Freq.	Percent	Cum.
0	56	37.09	37.09
1	95	62.91	100.00
Total	151	100.00	

## Regression result

```
5 . regress ovrl_avg env_avg hlth_avg soc_avg prc_avg qlty_avg tst_avg frsh_avg lbl_avg
> l_avg
```

Source	SS	df	MS	Number of obs	=	151
Model	34.4259601	8	4.30324501	F(8, 142)	=	25.34
Residual	24.1111965	142	.169797158	Prob > F	=	0.0000
				R-squared	=	0.5881
				Adj R-squared	=	0.5649
Total	58.5371565	150	.39024771	Root MSE	=	.41206

ovrl_avg	Coefficient	Std. err.	t	P> t	[95% conf. interval]
env_avg	.2102545	.0624013	3.37	0.001	.086899 .33361
hlth_avg	.1482081	.0694958	2.13	0.035	.010828 .2855882
soc_avg	-.0138798	.0557985	-0.25	0.804	-.1241829 .0964233
prc_avg	.0455896	.040182	1.13	0.258	-.0338426 .1250218
qlty_avg	.2444421	.0678917	3.60	0.000	.110233 .3786512
tst_avg	.1687315	.059791	2.82	0.005	.0505359 .2869271
frsh_avg	-.0125836	.0542156	-0.23	0.817	-.1197577 .0945904
lbl_avg	.0621088	.0574612	1.08	0.282	-.0514811 .1756987
_cons	.7987215	.2776204	2.88	0.005	.2499184 1.347525

## Adequacy of Factor Analysis and Community Scores on SPSS

<b>KMO and Bartlett's Test</b>	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,823
Bartlett's Test of Sphericity	Approx. Chi-Square
	402,603
	df
	28
	Sig.
	<,001

<b>Communalities</b>		
	Initial	Extraction
env_avg	1,000	,613
hlth_avg	1,000	,628
soc_avg	1,000	,365
prc_avg	1,000	,460
qlty_avg	1,000	,693
tst_avg	1,000	,713
frsh_avg	1,000	,565
lbl_avg	1,000	,714

Extraction Method: Principal Component Analysis.

## Factorisation and following regressions

```
6 . pca env_avg hlth_avg prc_avg qlty_avg tst_avg frsh_avg lbl_avg
```

```
Principal components/correlation      Number of obs   =    151
                                      Number of comp. =     7
                                      Trace             =     7
Rotation: (unrotated = principal)    Rho             =    1.0000
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	3.54648	2.55465	0.5066	0.5066
Comp2	.991827	.247825	0.1417	0.6483
Comp3	.744002	.14647	0.1063	0.7546
Comp4	.597532	.15778	0.0854	0.8400
Comp5	.439752	.0443409	0.0628	0.9028
Comp6	.395411	.110412	0.0565	0.9593
Comp7	.284999	.	0.0407	1.0000

```
8 . factor env_avg hlth_avg prc_avg qlty_avg tst_avg frsh_avg lbl_avg, factors(2)
(obs=151)
```

```
Factor analysis/correlation      Number of obs   =    151
Method: principal factors        Retained factors =     2
Rotation: (unrotated)           Number of params =    13
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.99528	2.55755	0.9825	0.9825
Factor2	0.43773	0.33240	0.1436	1.1261
Factor3	0.10533	0.06240	0.0345	1.1606
Factor4	0.04292	0.18645	0.0141	1.1747
Factor5	-0.14353	0.01193	-0.0471	1.1276
Factor6	-0.15546	0.07810	-0.0510	1.0766
Factor7	-0.23356	.	-0.0766	1.0000

```
LR test: independent vs. saturated: chi2(21) = 378.09 Prob>chi2 = 0.0000
```

Factor loadings (pattern matrix) and unique variances

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Variable	Factor1	Factor2	Uniqueness
env_avg	0.6567	0.2787	0.4910
hlth_avg	0.6701	-0.1583	0.5260
prc_avg	0.4865	0.1999	0.7233
qlty_avg	0.7301	-0.2271	0.4154
tst_avg	0.6895	-0.2452	0.4644
frsh_avg	0.6565	-0.1571	0.5443
lbl_avg	0.6624	0.3983	0.4026





```
28 . regress ovrl_avg factor1_score factor2_score age factor1_age_interaction facto
> r2_age_interaction
```

Source	SS	df	MS	Number of obs	=	151
Model	33.7884214	5	6.75768428	F(5, 145)	=	39.59
Residual	24.7487352	145	.170680932	Prob > F	=	0.0000
				R-squared	=	0.5772
				Adj R-squared	=	0.5626
Total	58.5371565	150	.39024771	Root MSE	=	.41314

```
> _____
```

	ovrl_avg	Coefficient	Std. err.	t	P> t	[95% conf.
> interval]						
> _____						
>	factor1_score	.1847911	.1303087	1.42	0.158	-.0727588
>	.4423409					
>	factor2_score	.2881638	.1354142	2.13	0.035	.0205231
>	.5558045					
>	age	.0041664	.0023945	1.74	0.084	-.0005663
>	.0088991					
>	factor1_age_interaction	.0045964	.0026724	1.72	0.088	-.0006854
>	.0098782					
>	factor2_age_interaction	-.0001736	.0030072	-0.06	0.954	-.0061171
>	.00577					
>	_cons	4.162177	.1084181	38.39	0.000	3.947894

```
> 4.376461
```

```
29 . regress ovrl_avg factor1_score factor2_score gender factor1_gender_interaction
> factor2_gender_interaction
```

Source	SS	df	MS	Number of obs	=	151
Model	32.7856257	5	6.55712513	F(5, 145)	=	36.92
Residual	25.7515309	145	.177596765	Prob > F	=	0.0000
				R-squared	=	0.5601
				Adj R-squared	=	0.5449
Total	58.5371565	150	.39024771	Root MSE	=	.42142

```
> _____
```

	ovrl_avg	Coefficient	Std. err.	t	P> t	[95% con
> f. interval]						
> _____						
>	factor1_score	.417242	.0641163	6.51	0.000	.2905186
>	.5439653					
>	factor2_score	.2845766	.0808424	3.52	0.001	.1247948
>	.4443585					
>	gender	-.0078035	.0715821	-0.11	0.913	-.1492826
>	.1336757					
>	factor1_gender_interaction	-.0180765	.0905818	-0.20	0.842	-.1971077
>	.1609547					
>	factor2_gender_interaction	.0335047	.0987665	0.34	0.735	-.1617032
>	.2287126					
>	_cons	4.349592	.0568175	76.55	0.000	4.237295
>	4.46189					
> _____						

## APPENDIX C – Yes responses raw data from collected surveys, exported pdf of STATA.

	RecordedDate	Distribut...	Q1	Q2	Q3	H1	H2	H3	E1	E2	E3	S1	S2	S3
1	28-Jun-2024 09:02:39	qr	Yes	37	1	5	5	5	5	5	5	3	3	3
2	28-Jun-2024 09:28:27	in-person	Yes	57	1	5	5	5	5	5	5	3	3	2
3	28-Jun-2024 09:38:49	in-person	Yes	23	0	4	4	4	3	4	4	3	3	3
4	28-Jun-2024 09:47:38	in-person	Yes	46	1	5	5	4	5	4	4	2	3	3
5	28-Jun-2024 09:58:28	in-person	Yes	23	0	4	4	4	5	5	5	4	4	4
6	28-Jun-2024 10:04:23	in-person	Yes	50	1	4	3	4	5	5	5	3	4	3
7	28-Jun-2024 10:22:22	qr	Yes	48	1	5	5	5	4	5	5	5	5	5
8	28-Jun-2024 10:43:23	in-person	Yes	61	0	5	4	5	3	4	2	3	4	3
9	28-Jun-2024 10:49:59	in-person	Yes	28	1	4	4	4	3	4	3	4	3	3
10	28-Jun-2024 11:02:38	in-person	Yes	32	1	4	4	4	5	5	4	5	4	5
11	28-Jun-2024 11:20:32	in-person	Yes	39	1	4	5	5	4	4	5	4	4	5
12	28-Jun-2024 11:39:02	in-person	Yes	56	0	3	3	3	5	5	5	3	3	3
13	28-Jun-2024 11:47:43	qr	Yes	58	1	4	4	4	5	5	5	3	4	3
14	28-Jun-2024 12:09:30	in-person	Yes	57	1	4	4	4	4	3	2	3	3	3
15	28-Jun-2024 12:20:40	in-person	Yes	35	0	5	5	5	3	5	5	5	4	4
16	28-Jun-2024 12:32:45	qr	Yes	32	0	5	5	5	5	5	5	5	5	5
17	28-Jun-2024 12:45:30	in-person	Yes	66	1	4	4	4	5	5	5	3	4	3
18	28-Jun-2024 13:10:09	qr	Yes	56	1	4	4	5	4	4	4	2	3	3
19	28-Jun-2024 13:19:40	qr	Yes	37	1	4	3	4	4	4	5	3	3	3
20	28-Jun-2024 13:38:10	in-person	Yes	48	0	4	4	4	4	4	3	4	4	3
21	28-Jun-2024 14:37:46	in-person	Yes	62	0	4	4	5	4	5	5	3	4	4
22	28-Jun-2024 14:42:12	qr	Yes	42	0	4	3	4	3	3	4	3	3	3
23	28-Jun-2024 14:48:34	qr	Yes	32	1	5	5	5	5	5	5	3	3	5
24	28-Jun-2024 14:49:27	qr	Yes	43	0	5	5	5	5	3	5	3	3	3
25	28-Jun-2024 14:58:39	in-person	Yes	67	0	3	3	4	3	5	5	3	4	4
26	28-Jun-2024 15:12:22	in-person	Yes	67	1	3	3	4	3	4	5	3	4	4
27	28-Jun-2024 15:29:27	qr	Yes	25	1	4	4	4	4	4	4	3	3	4
28	28-Jun-2024 15:37:18	in-person	Yes	22	1	4	5	5	5	5	4	4	4	4
29	28-Jun-2024 15:42:57	in-person	Yes	63	1	5	5	5	4	5	5	3	4	3
30	28-Jun-2024 15:43:58	in-person	Yes	22	0	2	3	3	2	2	3	3	3	4
31	28-Jun-2024 15:51:54	qr	Yes	29	0	4	4	5	3	3	3	4	3	4
32	28-Jun-2024 15:55:15	qr	Yes	33	0	5	5	4	3	3	3	3	3	4
33	28-Jun-2024 16:02:30	in-person	Yes	25	1	4	4	4	4	4	4	4	4	4
34	28-Jun-2024 16:16:44	qr	Yes	26	1	4	4	5	5	5	5	5	4	3
35	28-Jun-2024 16:44:49	in-person	Yes	72	0	5	5	5	5	4	5	3	3	4
36	28-Jun-2024 16:45:53	qr	Yes	61	1	5	5	5	5	5	5	3	3	3
37	28-Jun-2024 16:59:30	qr	Yes	34	1	4	4	3	3	3	3	3	3	3
38	28-Jun-2024 17:02:50	in-person	Yes	24	1	5	4	5	3	3	4	3	3	3
39	28-Jun-2024 17:03:03	in-person	Yes	32	0	5	5	5	5	4	4	4	5	4
40	28-Jun-2024 17:38:46	in-person	Yes	30	1	4	4	4	4	4	4	3	3	4
41	28-Jun-2024 17:43:55	in-person	Yes	23	1	5	4	5	4	4	4	3	3	3
42	28-Jun-2024 17:48:58	qr	Yes	27	1	4	4	4	4	5	4	3	3	3
43	28-Jun-2024 17:50:10	qr	Yes	28	0	5	4	4	3	3	3	3	3	3
44	28-Jun-2024 17:54:18	in-person	Yes	21	1	4	4	4	3	4	5	4	5	2
45	28-Jun-2024 18:52:21	qr	Yes	37	1	5	4	5	4	4	5	3	3	4
46	29-Jun-2024 09:55:52	in-person	Yes	32	1	5	5	5	4	4	4	3	3	5
47	29-Jun-2024 10:08:22	qr	Yes	41	1	5	5	4	5	5	5	3	4	5
48	29-Jun-2024 10:10:57	in-person	Yes	44	0	4	4	4	5	5	5	3	3	5
49	29-Jun-2024 10:17:19	qr	Yes	35	1	4	4	4	2	4	5	3	3	3
50	29-Jun-2024 10:24:06	in-person	Yes	66	0	4	4	5	4	5	4	5	2	3
51	29-Jun-2024 10:31:31	in-person	Yes	35	1	5	4	5	3	4	4	3	3	2
52	29-Jun-2024 10:38:47	qr	Yes	36	1	5	5	5	5	4	4	3	5	4
53	29-Jun-2024 10:44:46	in-person	Yes	67	1	5	5	4	5	5	5	4	4	4

	RecordedDate	Distribut...	Q1	Q2	Q3	H1	H2	H3	E1	E2	E3	S1	S2	S3
54	29-Jun-2024 10:49:19	in-person	Yes	32	1	5	5	5	3	4	4	3	4	3
55	29-Jun-2024 10:49:59	qr	Yes	37	0	5	5	5	4	4	5	3	3	3
56	29-Jun-2024 11:08:04	qr	Yes	35	1	4	3	3	5	5	5	3	3	3
57	29-Jun-2024 11:08:20	qr	Yes	39	1	4	4	4	4	4	4	3	3	3
58	29-Jun-2024 11:25:59	qr	Yes	63	1	4	5	5	5	5	5	3	3	3
59	29-Jun-2024 11:43:32	in-person	Yes	25	0	5	5	5	4	4	4	4	4	4
60	29-Jun-2024 12:01:40	in-person	Yes	57	1	4	3	5	5	4	4	3	4	4
61	29-Jun-2024 12:55:43	in-person	Yes	43	0	5	3	4	4	4	5	3	3	3
62	29-Jun-2024 13:02:41	in-person	Yes	55	0	5	4	4	4	4	4	1	4	3
63	29-Jun-2024 13:40:37	in-person	Yes	63	1	4	4	5	4	5	5	4	4	3
64	29-Jun-2024 13:50:54	qr	Yes	34	0	3	3	3	4	3	4	3	3	3
65	29-Jun-2024 13:55:25	in-person	Yes	40	1	5	5	5	5	5	5	3	4	4
66	29-Jun-2024 14:06:07	in-person	Yes	58	1	4	4	4	4	4	5	3	3	3
67	29-Jun-2024 14:10:39	qr	Yes	53	0	5	5	5	4	5	5	3	3	5
68	29-Jun-2024 14:15:09	in-person	Yes	25	0	5	5	5	4	4	4	3	3	3
69	29-Jun-2024 14:24:05	in-person	Yes	29	1	5	5	5	4	3	4	3	3	3
70	29-Jun-2024 14:37:10	in-person	Yes	27	0	4	4	4	4	5	4	3	3	3
71	29-Jun-2024 14:47:57	qr	Yes	34	0	4	4	3	4	4	3	2	3	2
72	29-Jun-2024 14:48:16	qr	Yes	35	1	5	4	4	5	5	5	3	3	3
73	29-Jun-2024 14:51:18	in-person	Yes	80	0	1	1	1	1	1	1	1	1	1
74	29-Jun-2024 15:24:59	in-person	Yes	45	1	4	5	5	3	4	4	3	4	4
75	29-Jun-2024 15:29:03	qr	Yes	57	0	3	3	5	5	3	5	2	2	3
76	29-Jun-2024 15:34:55	qr	Yes	63	1	5	4	5	5	4	5	3	4	3
77	30-Jun-2024 09:09:59	qr	Yes	50	0	4	3	4	3	3	4	2	1	2
78	30-Jun-2024 11:00:31	qr	Yes	43	1	4	4	5	5	5	5	4	3	3
79	30-Jun-2024 11:00:34	qr	Yes	23	1	5	5	5	3	4	4	3	3	4
80	30-Jun-2024 11:02:08	qr	Yes	32	1	4	4	4	3	3	3	3	3	3
81	30-Jun-2024 11:02:16	qr	Yes	23	1	4	4	4	3	3	3	3	4	4
82	30-Jun-2024 11:02:36	qr	Yes	42	1	5	5	5	4	4	5	3	3	5
83	30-Jun-2024 11:02:57	in-person	Yes	50	0	5	4	5	4	4	5	3	3	3
84	30-Jun-2024 11:07:21	in-person	Yes	48	0	4	4	4	4	5	5	2	4	3
85	30-Jun-2024 11:27:14	in-person	Yes	51	1	5	5	5	5	5	5	3	3	3
86	30-Jun-2024 11:33:51	in-person	Yes	48	1	5	5	5	5	3	3	3	3	4
87	30-Jun-2024 11:55:34	qr	Yes	26	1	4	4	4	3	3	3	3	2	4
88	30-Jun-2024 12:03:04	qr	Yes	50	0	4	4	4	4	5	5	3	4	3
89	30-Jun-2024 12:10:28	in-person	Yes	79	1	4	4	3	5	3	4	3	5	5
90	30-Jun-2024 12:23:07	qr	Yes	29	0	5	3	5	3	3	3	3	3	3
91	30-Jun-2024 12:24:05	qr	Yes	29	1	4	4	4	4	4	4	4	3	5
92	30-Jun-2024 12:40:30	in-person	Yes	52	1	5	5	5	4	3	5	1	3	3
93	30-Jun-2024 12:41:20	qr	Yes	46	1	4	3	4	4	3	5	3	3	3
94	30-Jun-2024 12:46:44	in-person	Yes	37	0	4	4	3	4	4	4	3	3	3
95	30-Jun-2024 13:06:47	qr	Yes	30	1	4	4	4	5	4	5	3	3	3
96	30-Jun-2024 13:07:03	qr	Yes	38	1	5	5	5	5	4	5	4	5	3
97	30-Jun-2024 13:09:56	qr	Yes	29	0	5	5	5	5	4	5	3	3	4
98	30-Jun-2024 13:56:52	in-person	Yes	74	1	5	5	5	5	3	5	2	3	5
99	30-Jun-2024 14:56:00	in-person	Yes	63	0	4	5	4	5	5	5	3	5	3
100	30-Jun-2024 15:38:57	in-person	Yes	40	1	3	3	5	5	5	5	3	3	3
101	30-Jun-2024 15:43:56	in-person	Yes	37	0	3	3	3	3	3	4	3	4	4
102	30-Jun-2024 16:01:01	in-person	Yes	35	1	5	4	5	4	4	5	3	4	3
103	30-Jun-2024 17:01:02	qr	Yes	35	1	4	4	4	3	3	4	3	3	3
104	30-Jun-2024 19:52:43	qr	Yes	33	1	5	3	5	5	5	5	4	3	4
105	2-Jul-2024 10:12:37	in-person	Yes	32	1	4	4	4	4	4	4	3	3	3
106	2-Jul-2024 13:59:43	in-person	Yes	23	0	5	5	5	5	5	5	3	3	3

	RecordedDate	Distribut...	Q1	Q2	Q3	H1	H2	H3	E1	E2	E3	S1	S2	S3
107	2-Jul-2024 14:12:48	in-person	Yes	47	1	5	5	5	5	5	5	5	5	5
108	2-Jul-2024 14:17:31	qr	Yes	33	1	4	4	4	4	3	2	3	3	3
109	2-Jul-2024 14:28:17	in-person	Yes	58	1	5	5	5	4	5	5	3	5	5
110	2-Jul-2024 14:37:39	in-person	Yes	56	1	5	5	5	3	5	5	4	4	3
111	2-Jul-2024 15:35:21	in-person	Yes	50	1	5	5	5	5	4	5	3	3	3
112	2-Jul-2024 15:48:50	in-person	Yes	40	0	3	3	4	4	4	4	3	3	4
113	2-Jul-2024 16:06:40	in-person	Yes	56	0	5	5	5	4	4	4	3	3	3
114	2-Jul-2024 16:17:16	in-person	Yes	48	1	5	5	5	3	4	5	4	4	3
115	2-Jul-2024 16:39:06	in-person	Yes	75	0	5	4	4	5	5	5	2	3	2
116	2-Jul-2024 16:52:37	in-person	Yes	54	1	5	5	5	5	5	5	3	4	3
117	2-Jul-2024 17:07:25	qr	Yes	26	0	4	3	4	4	4	2	3	3	2
118	2-Jul-2024 17:15:17	in-person	Yes	42	0	5	5	5	4	4	5	3	3	3
119	2-Jul-2024 17:36:07	qr	Yes	33	1	5	5	5	4	3	4	3	3	3
120	2-Jul-2024 17:53:55	qr	Yes	33	1	5	4	3	2	2	4	4	2	4
121	2-Jul-2024 17:57:12	qr	Yes	33	1	4	5	4	3	4	3	2	3	3
122	2-Jul-2024 17:58:53	in-person	Yes	29	1	4	4	5	5	4	5	3	3	3
123	2-Jul-2024 18:10:08	qr	Yes	48	1	5	4	5	5	4	5	3	3	3
124	2-Jul-2024 18:26:50	in-person	Yes	47	1	5	5	5	5	5	5	4	3	3
125	2-Jul-2024 18:36:17	qr	Yes	31	1	3	5	3	5	4	4	3	5	5
126	2-Jul-2024 18:39:35	in-person	Yes	50	1	5	5	5	5	5	5	3	3	3
127	2-Jul-2024 20:25:47	qr	Yes	23	1	4	3	4	4	3	4	4	4	4
128	2-Jul-2024 20:36:31	qr	Yes	22	1	4	5	4	2	3	3	4	3	2
129	2-Jul-2024 20:54:48	qr	Yes	53	1	4	4	4	4	5	5	4	3	3
130	3-Jul-2024 11:41:51	in-person	Yes	67	0	5	5	5	2	2	3	1	1	1
131	3-Jul-2024 11:48:18	qr	Yes	23	1	3	5	5	5	5	5	3	5	4
132	3-Jul-2024 11:57:26	in-person	Yes	68	0	4	4	4	4	5	4	3	4	3
133	3-Jul-2024 12:03:25	qr	Yes	39	1	4	5	5	5	4	5	3	3	3
134	3-Jul-2024 12:05:35	in-person	Yes	20	1	4	4	4	3	4	4	3	3	3
135	3-Jul-2024 12:26:43	in-person	Yes	49	0	5	5	5	3	3	2	3	4	3
136	3-Jul-2024 12:31:09	qr	Yes	21	1	4	4	4	4	2	1	2	3	3
137	3-Jul-2024 12:35:42	in-person	Yes	61	1	3	5	3	5	5	5	3	3	3
138	3-Jul-2024 12:55:52	in-person	Yes	54	0	4	3	4	5	4	4	2	3	3
139	3-Jul-2024 13:09:31	in-person	Yes	68	0	5	5	5	5	5	5	5	5	3
140	3-Jul-2024 13:25:26	in-person	Yes	39	0	5	5	5	5	5	5	5	5	5
141	3-Jul-2024 13:43:43	qr	Yes	23	1	4	4	4	2	3	4	4	4	4
142	3-Jul-2024 14:04:24	in-person	Yes	70	0	5	5	5	5	4	5	4	4	5
143	3-Jul-2024 14:19:56	in-person	Yes	59	1	5	5	5	4	5	5	1	1	1
144	3-Jul-2024 14:34:35	in-person	Yes	64	0	4	4	5	4	4	5	3	4	3
145	3-Jul-2024 14:39:39	in-person	Yes	26	1	5	5	5	4	4	5	3	4	3
146	3-Jul-2024 14:44:55	in-person	Yes	61	1	4	5	5	5	5	5	4	5	3
147	3-Jul-2024 14:54:10	qr	Yes	36	1	4	5	3	4	5	5	4	3	3
148	3-Jul-2024 14:59:15	in-person	Yes	39	0	5	4	5	2	4	5	2	1	2
149	3-Jul-2024 15:09:16	in-person	Yes	33	0	3	3	3	3	3	4	3	3	3
150	3-Jul-2024 16:33:45	qr	Yes	31	0	3	3	4	4	3	3	4	5	4
151	3-Jul-2024 16:42:23	qr	Yes	40	1	5	5	5	5	5	5	3	3	3

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