Discount effects on the healthiness of dietary choices

Qualitative research on the effect of supermarket discounts on the healthiness of diets

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Preface and Acknowledgements

I have become passionate about food through my education in International Food Business. Among this passion in food, interest shaped in diets and the reasoning behind them. Hence I wanted to write my thesis about diets. However, I did not yet know in what context I was going to place the subject of diets. So I decided to walk into a supermarket with a piece of paper and a pen. I wrote down everything that struck my attention. After going over all the things I had written down. I decided to write my thesis about diets in relation to discounts. Due to the fact that personally I always look for discounts. But I still know little about the practice and psychology of discounts. Therefore, I decided to write a research to aid consumers in making more health conscious dietary decisions.

Writing this research proposal has been an educational experience. I'd like to thank my coach Patrick Burgess for helping me to put my ideas on paper and to aid me in keeping my work structured and clear.

In order to optimize the thesis, the following adjustments were made to chapter 1 & 2 since the last submission.
- Shopping scenarios were altered before spreading survey: products were added and removed in order to match the over style of the research.
- References were improved
- Methodology was transferred to past tense
- Overall grammar and quality improvements according to the report writing checklist, this checklist can be found in appendix 2.

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Summary

Supermarket discounts have many benefits, they prevent food waste and they can benefit the wallet of the consumer. However, when discount can tempt a consumer to make purchases, he would not have made were the discount not there, then the discount (even though good for the wallet) could have had a negative impact on the healthiness of the diet of this consumer. This research has been conducted to identify the scope of this problem. Hence, make the consumer conscious about further consequences related to the decision to buy in discount. The focus will not be on the price, but on the health effect on the diet of the consumer.

This research discovered that discount could have a negative influence on the healthiness of the Dutch consumer. The findings of this research are therefore relevant to the Dutch consumer, but also the supermarket branch that provides the discounts.

The research found that when consumers are exposed to discounts used on unhealthy products and on healthy products, they are often more susceptible to utilise the discount on unhealthy products. The research came to these findings by asking the following question: *To what extent can supermarket discounts influence the healthiness of Dutch diets?*
The following sub-questions were made in order to support answering the main question:

1. *Does the consumer buy discounted products with intent?*
2. *From a consumer perspective, which food categories are the consumers most eager to buy as a result of discounts?*
3. *With what motivation does the consumer purchase discounted products?*
4. *To what extent will a discount influence consumers to buy products, that they would or would not have bought were the products not on discount?*

During the research, 150 Dutch consumers were asked to fill out a two-part survey. The first part contained a simulated shopping experience. The second part of the survey was a questionnaire with demographic questions.

Recommendation: in order to limit the negative effects of discount this report provided the following recommendations:

1. For consumers to make a shopping list and only buy discounted products that are substitutable for the products on your list.
2. For supermarkets to introduce discounts that are based on health. For example: "Double the protein, Half the price!"

1. Introduction

Limiting food waste is an essential effort in increasing the sustainable practices within the Netherlands. Food waste occurs in the entire chain but is the largest in the consumer sector. Looking for barriers to reduce food waste is important for food producers, retailers, and marketers (Janssen, 2020). Many methods over the years have proven to be successful in limiting the amounts of food that are being wasted. One of the more successful ways of limiting these amounts is the application of discounts on products that are either over stocked or about to expire (Ball, 2011). Discounts in the food industry appear in many forms and their effectiveness would thus depend on the type of discount utilized. For the retailer, the main purpose of utilizing discounts is promoting certain products and avoiding food waste. However, it would be interesting to also look at the effect the discount has on the consumer.

Globally the amount of food options is increasing more rapidly than ever before. These different choices make for a vast number of different diets. These diets will consequently influence the health of the consumers (GDAR network, 2020). Zooming in on the Netherlands, the Netherlands mostly has a healthy population with an increasing life expectancy. However, more than half of the population is overweight and chronic diseases are amongst the population. These health issues can be mitigated through making positive dietary changes. A healthy diet is characterized by eating a variety of nutrient rich food, not eating too much or too little, and eating primarily plant-based products (RIVM, 2017). The basis of a healthy diet can be found in the Dutch dietary guidelines created by *The Netherlands Nutrition Centre*. Yet the Dutch consumer rarely eats according to these Dutch dietary guidelines. Only about 15% of adults consume the recommended 200 grams of fruit and 200 grams of vegetables and per day (Geurts, Van Bakel , Van Rossum, Ocké, 2015; Boer, et al. 2017).

The problem with discounts is that consumers can be deceived into buying unhealthy products for impractical reasons. Discounts could therefore have a negative impact on the healthiness of the consumer's diet, if the consumer is not aware of the influence that discounts can have on them (Lyonnais, Rafferty, Jilcott Pitts, Blanchard & Kaur, 2020). There is still no research that solves this problem.

1.1 Inconsistency of the Dutch diet

In order to analyze if discounts are able to influence the diets of Dutch consumers, it is first of essence to visualize what this diet contains and how fixed it is. A diet is defined as the kinds of food that a person habitually eats. The Dutch diet is characterized by large quantities of dairy and potato. But also by having many snacks in addition to regular meals (Van Rossum, et al. 2016). A rough average of the Dutch diet is visualized below.
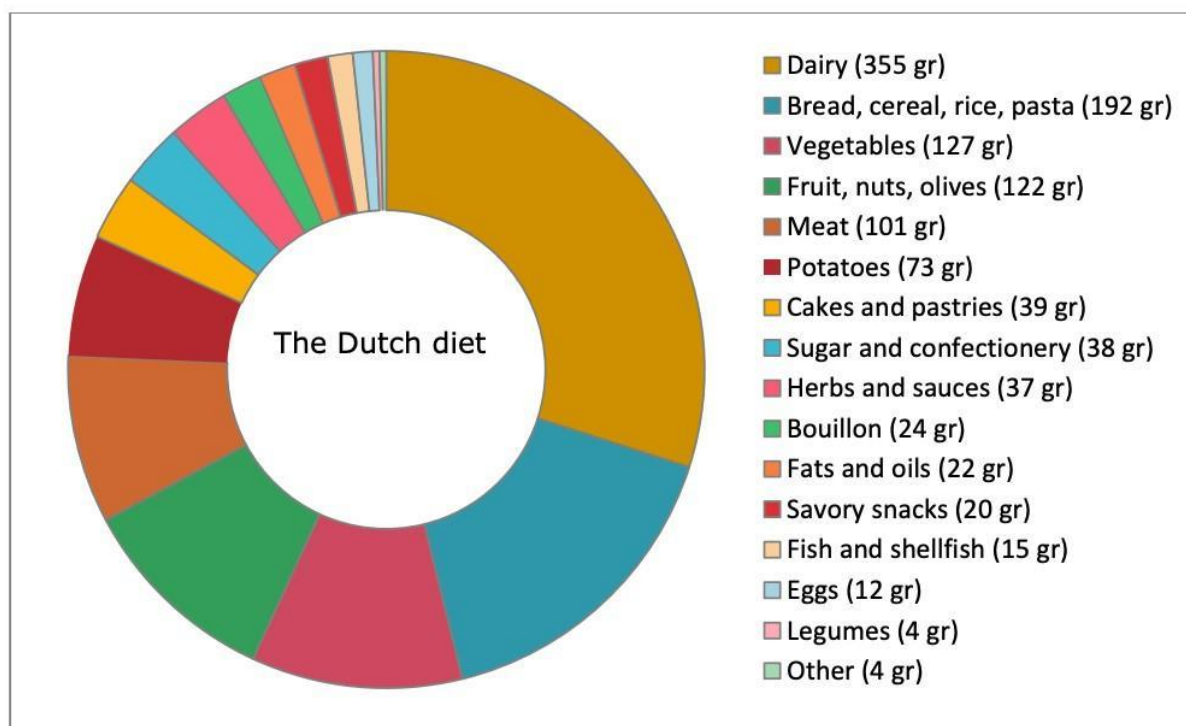
Figure 1. The average consumption of foods in grams per day by 1-79 year olds (excluding alcoholic and non-alcoholic beverages, 152 and 1725 grams per day, respectively), VCP 2012-2014 (Van Rossum, et al. 2016).

There are various methods of assessing dietary patterns. A commonly used form of assessment is through creating a dietary index. These indices are often based on dietary recommendations that aim to support a healthy lifestyle. These indices are then used to monitor the healthiness of the population's diet and to capture possible changes over time. Looking for correlations in dietary components can lead to confounded results. Hence the use of a dietary pattern variable is favourable. A Dutch Health Index has been created by Linde van Lee (Lee, 2012). The results of this study show significant differences in the diets between men and women. From a health perspective, women scored significantly better in the categories: physical activity, dietary fiber, sodium and alcohol. Whereas men scored better in the categories: vegetable, saturated fatty acids and trans fatty acids (Lee, 2012).

The research from Linde van Lee proves that the average Dutch eater does not exist. This was further confirmed by research of Geurts and de Boer. Geurts found that higher educated people have a healthier diet consuming more fruit, vegetables and water. Whereas lower educated people consume more cooking fats, spreads and soda's (Geurts, et al. 2015). De Boer found that the large population groups with a migration background consume less alcohol and dairy products than those with a Dutch background (De Boer, et al. 2015).

Although the individual diets of Dutch consumers vary greatly, it does not imply that these diets are impervious to alterations. For instance, due to external influences such as food trends. The figure below shows the change in Dutch consumption between

2007 and 2014. This is done by comparing VCP's over different periods. VCP stands for *Voedsel Consumptie Peiling*, translated to English: food consumption poll. A consumption alteration of 20% within 7 years shows that the diet of the Dutch consumer is susceptible by external influences.
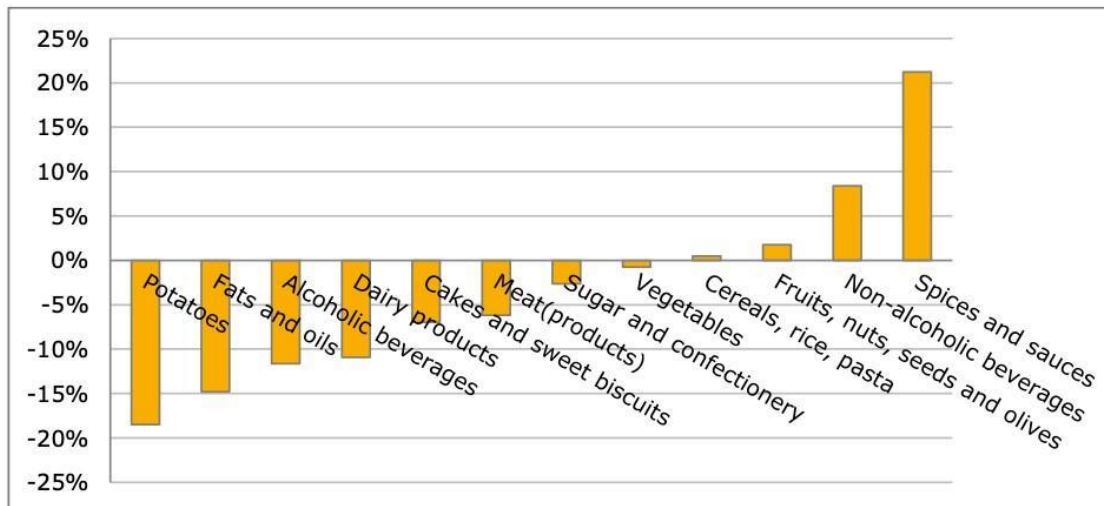

Figure 2. *Recent changes in food consumption. VCP 2012-2014 compared to VCP 2007-2010 for 969 year olds (Van Rossum, et al. 2016).*

1.2 Influences on the Dutch diet

Consumer decisions are more often than anything else determined by habits. Habits play a bigger factor than rational ones such as knowledge and motivation. These habits are often founded at birth, through the influence of parents and further shaped throughout an individual's life by family and friends (Kromhout, 2016). Another major influencer on the Dutch diet is the wide availability of food. The presence of many unhealthy products creates the risk of healthy food being substituted with unhealthy food (Geurts, et al. 2017).

When looking at less significant influences on the Dutch diets it is helpful to separate the consumers in high income and low income. Since these two groups are affected by different external influences. A study from Janet Whitall about influences on diets in low income families, shows that the local built food environment, amount of exercise, weight beliefs, emotional status and social, cultural, family and personal influences on behaviour are the main criteria affecting low-income families' diets (Withal, 2009). A similar study from Carlijn B.M.Kamphuis looks into the perceived differences and similarities of diets between low and high income families. This study found that high income families have lower boundaries, such as price, that influence their diets. High income families also tend to have better access to a variety of stores. They also purchase in more luxurious stores. These stores have prominent layouts which typically influences customers. Low income families tend to do their groceries

in budget stores, in which an influencing store layout is often lacking (Kamphuis, 2007). These influences are further elaborated in figure 3.

Figure 3 shows a Framework of environmental determinants contributing to the explanation of socioeconomic inequalities in health behaviours. The grey panel incorporates four boxes of environmental determinants. The terms household, neighbourhood and work are examples of the different settings in which these determinants may influence health behaviours. The abbreviations in the right-hand side boxes represent the following constructs: A=attitude; S=social influences, like social support, subjective norms, and modelling; PBC=perceived behavioural control; I=intention. These constructs are derived from the Theory of Planned Behaviour (Kamphuis ,2007).
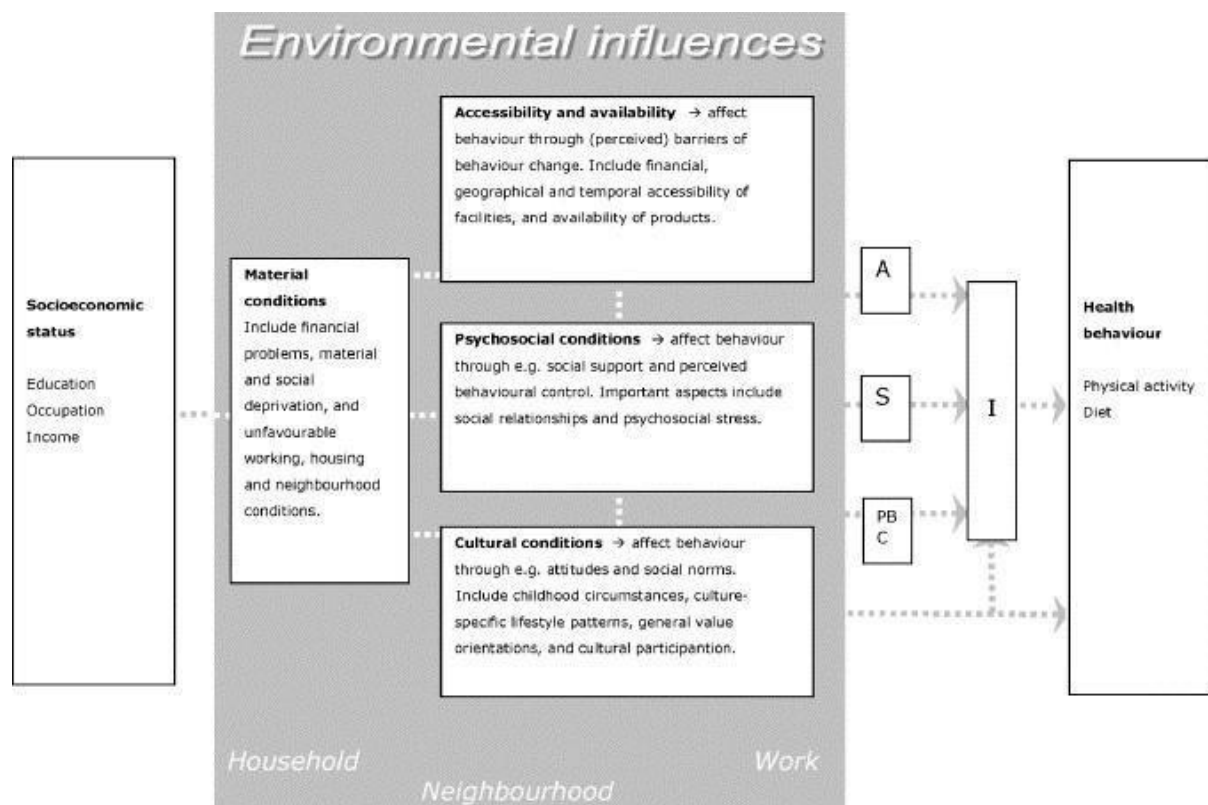
Figure 3. *Framework of environmental determinants contributing to the explanation of socioeconomic inequalities in health behaviours (Kamphuis ,2007).*

1.3 The purpose of discounts

In order to recognize the correlation between one's diet and discounted products it is important to be aware of the different forms of discounts that are being used in supermarkets (Bernales-Korins, Ang, Khan & Geliebter, 2017). There are two commonly used discount methods in supermarkets. The first being the most popular: the percentage discount. This promotion offers an n% discount on the initial price. The second frequently used discount is called BOGO. BOGO stands for buy

one get one free. This is being applied in two ways. The consumer either buys one and gets one for free. Or the consumer buys one and gets a certain percentage off their second item (Nicasio, 2019).

There are various reasons for grocery stores to provide discounts. A grocery store discount does not necessarily mean that the consumer is at an advantage (Katt & Meixner, 2020). For instance, when consumers purchase products bound to expire before they can consume them, or if they purchase products that they don't need. In these cases, the consumer is put in a disadvantage as a result of the discount. The decision of what discounts are utilized is not always made by the grocery store. When the reason for the discount is regarding excess inventory or promoting new products, it is moreover the manufacturer taking the initiative of launching discounts. The influence of grocery store managers on discounts is often concerned with products either bound to expire, products struggling to sell or products going out of season (Campbell, 2020).

Discounts can also be utilized to try to ignite long term changes (Waterlander, 2013). For example, through encouraging brand switching. Discounts can tempt brand loyal consumers to try new products. If this satisfies or exceeds their expectation of the initial product, it is possible that this consumer might switch brands. Another way to use a discount is to promote new products. (Blakely, 2010). The lowered price may induce the necessary curiosity to make the new purchase. This too can over time lead to brand switching. The downside of discounts is that it can make certain products look cheap thus decreasing brand value (Delvecchio, Krishnan & Smith, 2007).

1.4   Dutch culture and its influence on purchasing behavior

The culture of the Dutch can be used to explain their buying behavior. Therefore, the Dutch culture will be analyzed through the six dimensions model (Hofstede's Insights, 2018). The model is an elaborate study of values related to culture. The dimensions symbolize autonomous preferences that distinguish country cultures (Hofstede's Insights, 2018). This model has been selected as a tool of analysis because it covers a broad spectrum of cultural characteristics. The six dimensions are power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulgence. The model gives the country a score on each of the six dimensions. The score for every dimension is ranked from a scale of 1 – 120 in which 1 – 35 is considered a low score, 36 – 70 is considered a medium score and 71 – 120 represents a high score. The scores for the Netherlands are displayed in Figure 4.
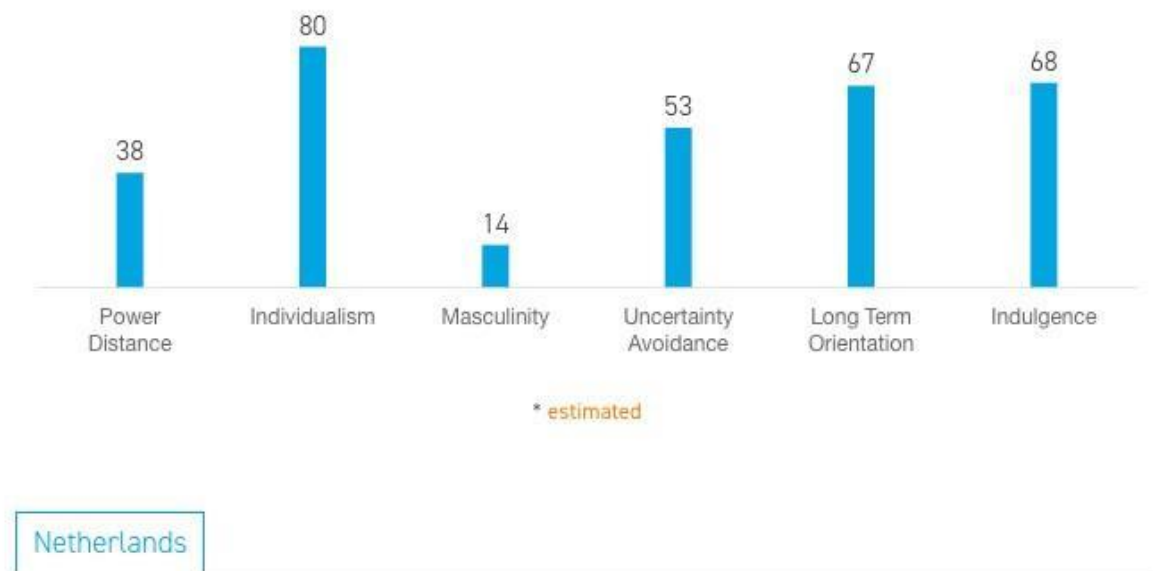
***Figure 4.** Hofstede's 6 dimensions for the Netherlands.*

The data displayed in figure 4 can be used to reflect on the buying behavior of the Dutch consumer. The two most extreme numbers are found in individualism and masculinity. Individualism is defined as *the degree of interdependence a society maintains among its members*. This trait may prove the Dutch consumer to be impervious to group pressure. So he would not be afraid to make his own decisions. The result of this could be that the Dutch diet may vary a lot. The other extreme is Masculinity, which is defined as *challenging traditional notions about masculinity and femininity*. This could indicate that the average Dutch household will not be solely influenced by female purchasing. Meaning that males will also contribute a great deal of the groceries. Both sexes contributing to the groceries result in a bigger variety of people doing groceries overall. Which would once again increase the variety of the diet (Hofstede's Insights, 2018).

The two other dimensions that have an influence on the purchasing pattern and the diet are uncertainty avoidance and long-term planning. Uncertainty avoidance is defined as "*The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these*. Long term planning is defined as *how every society has to maintain some links with its own past while dealing with the challenges of the present and future*." Concerning diet and purchasing patterns, high ratings in these dimensions would likely result in a more fixed diet. Since a more fixed diet avoids uncertainty and is easier to plan in the long term (Keuchenius, et al. 2015). The Netherlands score average on the remaining two dimensions: individualism and indulgence. It is difficult to interpret these two dimensions in relation to diets. Therefore, they can be neglected for the purposes of this research.

Looking at the Dutch culture in relation to diets, it could be said that the Dutch tend towards a more fixed diet. However, it also shows potential for the Dutch, to be persuaded to deviate from their fixed diet. Perhaps as a result of a discount.

This research could give retailers and grocery stores new insights into how they can utilize discounts. Existing research has focused on external influences on diets and on discounting methods. This research will take inspiration from those researches, but will separate itself by focusing on how supermarket discounts influence the healthiness of Dutch diets. This research will be specific to consumers in the Netherlands.

In the previous subchapter it was found that the Dutch diet tends to have a steady foundation. But it is not impervious from being altered by various influences, as is shown in figure 2 and 3. Regardless of a high income or a low income family, diets will remain vulnerable to be altered by external influences. As described earlier many of these influences are already known. However the influence of discounts is yet to be researched.

The previous sub-chapter also described the wide availability and use of discounts in groceries stores. These discounts and how they are used and portrayed, are also an external force that alters dietary decisions. This research aims to find the link between how discounts are used and how that can influence the dietary decisions of the Dutch population.

The main objective of this research is to determine the influence of discounts on the healthiness of the diet of the Dutch consumer. The rate of healthiness will be determined using the nutrient scoring system, created by the food standard agency. This nutrient scoring system will be further explained in the methodology.

Main Question:

To what extent can supermarket discounts influence the healthiness of Dutch diets?

Sub Questions:

1. *Does the consumer buy discounted products with intent?*

2. *From a consumer perspective, which food categories are the consumers most eager to buy as a result of discounts?*

3. *With what motivation does the consumer purchase discounted products?*

4. *To what extent will a discount influence consumers to buy products, that they would or would not have bought were the products not on discount?*

The answers to these questions will aid Dutch consumers in making more health conscious dietary choices, by making them more aware of the psychological

influences that supermarket discounts can have on their purchasing decisions.

This research aims to find out what effect discounts can have on the healthiness of the diets of Dutch consumers. The relevance of this research is that the consumer could be interested in such knowledge, because it would create further awareness into purchasing decisions, purchasing power and ultimately personal diet and health. These insights can lead to making more conscious, financial and health based decisions.

The findings of the research will also be beneficial for the retail owners. Because if they have the knowledge of how discounts can affect dietary decisions, they can use that information to determine stock size and as an aid to decide what products to put on discount. Additionally, further in-depth understanding of discount possibilities could enable beneficial modification of procurement plans and marketing (Janssen, 2020).

This first chapter has introduced the theoretical framework the research will be based upon. The main and sub-questions have been provided, as well as the knowledge gap. The following chapter will discuss the materials and methods of the research. It will outline the research design and the methodology concerned with answering the main question. The third chapter provides the timeline in which the research is strived to be finalized.

2. Methodology

The research methodology adopted a three step approach. The steps are described below.

Step 1: Survey Design.
A survey that mimics a real life shopping experience has been created. This survey aimed to discover to what extent consumers buy discounted products, that they would not have bought were the products not on discount. This happened for individual food products. But also for categories of food. The food products were rated with a health score, to ultimately aid in drawing conclusions regarding the influence on the healthiness of the diets of the Dutch consumers. The survey also contained questions about the intent, motivation and demographics of the participants, to get a picture of their regular shopping behavior. This was necessary to make correlations with the shopping experience part of the survey. To finally answer the main question of the research: *To what extent can supermarket discounts influence the healthiness of Dutch diets?*

Step 2: Data Collection.
The second step was to administer the survey. The survey was created in Google forms. And the target audience were Dutch consumers. The sample size consisted of 100 respondents. The survey was distributed through social media, mainly through LinkedIn in an attempt to reach a more serious audience. The results of the surveys were immediately available, due to the fact that the survey was carried out online.

Step 3: Data Analysis.
The third step was the analysis of the survey results. The products that were purchased on a discount have been compared with the health score assigned to these products. The influence of discounts on the healthiness of Dutch diets is determined through the correlation of "the products purchased on discount" and "the rate of healthiness of purchased products". This data was compared with the motivation, intent and demographics of the participants. Which further determined what contributions the discounts have had on the healthiness of the purchasing decisions of the participants.

2.1 Research design

Since the aim of the research was to learn about the consumer, it was important that the consumer was thoroughly involved in the research. Therefore, a survey was selected as the means of research. The choice of a survey as the means of research is justified by two main benefits. This is a quantitative research survey. Surveys are known to be efficient in gathering large amounts of quantitative feedback. As can be seen in another study about supermarkets from Green, M.A., Watson, A.W., Brunstrom, J.M. *et al.* In this study surveys were used to find the correlation between loyalty cards and traditional diet to ultimately find data on protein consumption (Green,

Watson, Brunstrom, *et al, 2020).* The second survey benefit that was taken into consideration is the low cost of both creation and execution of a survey.

The survey consists of two main components: a shopping scenario and a follow up demographic questionnaire. Participants were invited to complete both components of the survey. This study aimed to recruit a minimum of 150 participants, this has been successful. Equation 1 below displays the formula that was used to calculate this sample size. The variables are z= Z- score, p= Standard Deviation, e= Margin of Error and N= Population Size. The Z-score that is used is 1,96. This resulted from a perceived 95% confidence level of the research. The standard deviation 0,5, which is a neutral choice, in order to prevent speculation about the range of answers of the survey. The margin of error is 8%. This number was selected due to the fact that it was estimated that about 8% of the respondents would fail to answer questions accurately, either due to not being honest or due to not taking the survey seriously. The population is 17.000.000, this is the current population size of the Netherlands as of 2021 (Macrotrends, 2021). When these numbers are inserted, the formula provides a sample size of 150. Hence the targeted amount of completed surveys is 150 (Middleton, 2020).

$$\text{Sample size} = \frac{\dfrac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\dfrac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Equation 1. Sample size formula

The expected time to complete the two survey components was 5 to 10 minutes. This is believed to be ideal because it recreates a normal shopping experience. Limiting the amount of time that the participant can consider purchasing different products, recreates a more realistic experience. The main criteria for participants to participate in the research was to be Dutch, or they must have lived in the Netherlands for at least two years. These consumers were reached through sharing the survey on various social media platforms.

The first component is the shopping scenario. The participants got to see various products. These products were all retrieved from the same source: ah.nl, in order to harmonize the shopping experience. The shopping scenario however, was to be

interpreted as a general middle class supermarket, as mentioned in the survey. There were 20 products in total, each product showed the original price displayed on ah.nl. These 20 products have been selected due to the fact that they possess a wide range of health scores. Which is beneficial for the report, because it creates a more accurate analysis on the consequence of discounts on the healthiness of Dutch diets. For example, a banana will score high on healthiness whereas *Nutella* will score low. These products were all converted into health scores, in order to know the exact divergence of healthiness between the products. These scores were then used to find correlations with the different discount options, to ultimately answer the main question of this research.

Various discounts were added as options to these products. The task of the participant was to indicate how much they were to pay for each product. For each product there were five options. The first option was to pay the full price. The following three options consisted of discounts. The last option was to have no desire to buy the product at all.

The purpose of this research is to find a correlation between discounts and the healthiness of diets. The shopping scenario revealed if the discounts prompted the consumer to make more healthy or unhealthy purchases. The healthiness or unhealthiness of each product was defined by a nutrient score that each product has received. This nutrient score has been created by the Food Standard Agency. This nutrient score was given to each food and beverage on the basis of the nutrient content per 100 g. Positive points (table 1) 0 to +10 are allocated for the content of energy (kJ), saturated fats (g), total sugar (g), and sodium (mg), while negative points (table 2) 0 to −5 are allocated for the content of fruits/vegetables/nuts (g), dietary fiber (g), and protein (g). Scores for foods and beverages are thus based on a scale theoretically ranging from −15; being most healthy to +40; being least healthy (Murakami, 2017).

Table 1. *Positive points for nutrition scores (Department of Health, 2011)*

Points	Energy (kJ)	Sat Fat (g)	Total Sugar (g)	Sodium (mg)
0	≤ 335	≤ 1	≤ 4.5	≤ 90
1	>335	>1	>4.5	>90
2	>670	>2	>9	>180
3	>1005	>3	>13.5	>270
4	>1340	>4	>18	>360
5	>1675	>5	>22.5	>450
6	>2010	>6	>27	>540
7	>2345	>7	>31	>630
8	>2680	>8	>36	>720
9	>3015	>9	>40	>810
10	>3350	>10	>45	>900

Table 2. *Negative points for nutrition scores (Department of Health, 2011)*

Points	Fruit, Veg & Nuts (%)	NSP Fibre ' (g)	Or AOAC Fibre ' (g)	Protein (g)
0	≤ 40	≤ 0.7	≤ 0.9	≤ 1.6
1	>40	>0.7	>0.9	>1.6
2	>60	>1.4	>1.9	>3.2
3	-	>2.1	>2.8	>4.8
4	-	>2.8	>3.7	>6.4
5*	>80	>3.5	>4.7	>8.0

The questionnaire that followed the shopping scenario looked into behavioral influences on shopping patterns of the participants. These questions included the following subjects: gender, age, personal views on health, exercise, etc. The results of this questionnaire enabled for a more profound analysis of the answers of the shopping scenario. Which provided a broader insight of the influence of discounts on the healthiness of diets. The follow up questionnaire also helped with answering the sub-questions. In order to ultimately answer the main question, the selected purchase prices of the shopping scenario, were compared with the nutrient scores of the selected products.

The shopping scenario and the follow up questionnaire can be viewed in the appendix.

2.2 Methodology per sub-question

1. Does the consumer buy discounted products with intent?

At the end of section 1 of the questionnaire the participants were asked: "with how much intent do you buy discounted products?" They could answer this question through a scale that goes from 1 up to 7. At the beginning of the scale, at 1, it reads "I don't intend to buy discounts". Whereas at the end of the scale, at 7, it reads "I specifically look for discounts". This question provided 7 different levels of intent with

2. Which food categories are most subjective to discounts?

In the second section of the survey, there are 6 questions dedicated to this sub-question. These 6 questions all have the same structure. They are scale questions in which a 30% discount is applied to a certain category of product. This 30% discount is selected because it is often used in supermarkets. The participants had to answer on a scale of 1 to 5 how much this discount influenced their decision to buy in this food category. The six categories are: meat, dairy, carb dense products, snacks, vegetables and fruits.

3. With what motivation does the consumer purchase discounted products?

At the end of section 1 in the questionnaire, the participants were asked: "What is your motivation to buy discounted products?" They could then choose from 6 options and it was possible to select multiple options. The 6 options were: lower price, try new things, prevent food waste, to buy products in bulk for a cheaper price, stocking up on products and trying out substitute products. Through this question the biggest motivators for buying products at a discount were found.

4. To what extent will a discount influence consumers to buy products, that they wouldn't have bought were the products not on discount?

The majority of the first section, the shopping scenario, is dedicated to this question. The participants were being shown a total of 20 products. They could see the name, price and a small description of the products. The participants were then asked under what circumstance they were willing to buy this product. There were 5 options: to pay the full price, to buy with a 10% discount, to buy with a 20% discount, to buy with a 50% discount or to not buy the product at all. These singular discount options have been selected in order to find a clear correlation between buying a discounted product and the consequence that this single product has on the healthiness of a diet. 30% and 40% have been left out because they are redundant for the purposes of this research. It was not necessary to further burden the participants with more options since there were already three singular types of discounts that can aid in answering the sub questions. Instead, the choice was made to add more products in order to broaden the range of health scores. The influence of different percentages of discounts on various products was found through these questionnaire questions.

2.3 Method of analysis

A statistical correlation graph will be applied in order to analyze the data from the shopping scenario. An example of such a graph can be found in figure 5.
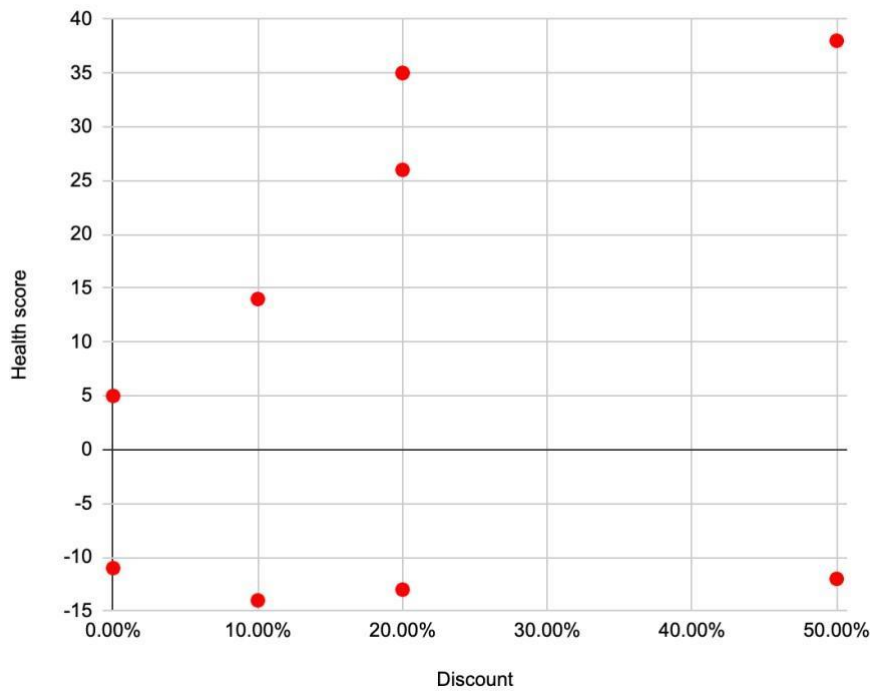
Figure 5. A correlation graph of the health score vs the discount rate

The horizontal axis displays the rate of discount whereas the vertical axis displays the health score. The health scores represent the different products that were used in the shopping scenario. The dots in the graph represent the purchases that the participants selected in the questionnaire. For example, when a participant selected a product with a health score of 35 for a 20% discount, a dot would appear at the intersection of 35 vertically and 20% horizontally.

There was an expected amount of about 3000 dots (150 participants * 20 products) in the graph. When all the results from the shopping scenario would be available, these dots were then used to find the correlation between discounts and the influence they can have on an individual's diet. In order to keep the data organised and permit to find correlations, the dots in the final graph represent the averages of all the purchases made. Generally speaking, if there would be more dots accumulated in the lower part of the graph, in combination with discounts selected, it would mean that the discounts would have improved the diets of the participants. Moreover, the low score indicates healthier food. However, if the dots accumulate greater in the upper parts of the graph, it would imply that the discounts have had a negative effect on the healthiness of the diets of the participants. In order to verify the consequence of the discounts, an indication of the regular diets of the participants is necessary. The dots on the vertical axis represent the health scores of the regular diets of the participants.

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Since they have selected to buy these products regardless of any discount. The positions of these dots can then be used to compare the regular consumption, with the consumption as a consequence of discounts.

When the dots, resulting from discounts, accumulate above the health scores of the regular diet, it would indicate that the discounts would have made a negative impact on the healthiness of the participants' diets. Whereas if the dots, resulting from discounts, accumulate below the health score of the regular diet. It would indicate that the discounts have made a positive impact on the healthiness of the participants' diets.

So by analyzing the patterns of accumulated dots, the correlation between discounts and the healthiness of the participants' diets was found. This happened through comparing the difference between the health scores of the participants' regular diets, with the discount induced divergence on the consequent healthiness of their dietary decisions.

3.   Results

In this chapter the results of the Shopping Scenario and the questionnaire will be provided. The results are divided per relevant sub-question.

3.1   Descriptive information about participants

At the end of the questionnaire the participants were requested to answer demographic questions. The results of these demographic questions can be seen in table 3. The participants consisted of 94 males with an average height and weight of 1,84 metres and 81,63 kilos respectively and 63 females with an average height and weight of 1,72 metres and 70,56 kilos respectively. It was expected that the males would be overall bigger than the females, yet the statistics also showed than on average the males in the respondents group are more physically active.

Table 3. Descriptive information about the participants

	Frequency	Age	Height	Weight	# exercise/ week
Male	94	34	1.83	81.63	3
Standard deviation	-	11.67	0.09	17.99	1.32
Female	63	34	1.72	70.56	2
Standard deviation	-	12.36	0.08	11.61	1.21

3.2   Health scores

In the methodology, chapter 2.1 Research design, it was explained how the products in the Shopping Scenario were going to be converted into health scores. The results of this process can be seen in table 2. The aim of this research is to determine the effect of discounts on the healthiness of diets. The health scores of every product were calculated in order to be able to make calculable comparisons of the different products based on their respective healthiness.

Table 4. Calculation of Health Scores

Product	Energy (KJ)	Sat Fat (g)	Total Sugar (g)	Sodium (mg)	Fruit, veg & nuts (%)	Fibre (g)	Protein (g)	Health score
Lentils	404	0,1	0,3	290	100	5,6	6,6	
Points	1	0	0	3	-5	-5	-4	-10
Tomato's	128	0,1	4	0	100	1,9	0,9	
Points	0	0	0	0	-5	-3	0	-8
Blue Berries	218	0	10	0	100	2,4	0,7	
Points	0	0	2	0	-5	-3	0	-6

Banana	372	0,1	12	1	100	2,6	1,1	
Points	1	0	2	0	-5	-3	0	-5
Maiswafels	1615	0,3	1,4	530	65	5,3	8,7	
Points	4	0	0	5	-2	-5	-5	-3
Potato's	375	0	1	0	0	2	2	
Points	1	0	0	0	0	-2	-1	-2
Naked bar	1863	2,6	34,4	0	100	8,9	7,6	
Points	5	2	7	0	-5	-5	-4	0
Salmon Filet	915	2,5	0	200	0	0	19	
Points	2	2	0	2	0	0	-5	1
Bread	1150	1	1,5	1080	0	4	13	
Points	3	0	0	10	0	-5	-5	3
Caesar Salad	444	1,5	1	680	26	0,9	7,2	
Points	1	1	0	7	0	-1	-4	4
Minced Beef	945	7	0	0,2	0	0	20	
Points	2	6	0	2	0	0	-5	5
Veggie Burger	709	1,4	1,5	1200	100	0	17	
Points	2	1	0	10	-5	0	0	8
Mini Pancakes	1245	0	6,5	800	0	1	5,5	
Points	3	0	1	8	0	-1	0	11
Drop Candy	1310	0	60	60	0	0	0	
Points	3	0	10	0	0	0	0	13
Ketchup	435	0	22,8	1800	65	0	1,2	
Points	1	0	5	10	-2	0	0	14
Chips	2129	2	0,9	2003	0	2,6	6,6	
Points	6	2	0	10	0	-3	0	15
Ben & Jerry's	1047	7,8	27	230	0	0	4,3	
Points	3	7	5	2	0	0	0	17

Cookies	1885	12	31	600	0	3,5	3,5	
Points	5	10	6	6	0	-4	0	23
Nutella	2252	10,6	56,3	107	13	5	6,3	
Points	7	10	10	10	0	-5	0	32
Chocolate Bar	2240	19,4	52,1	740	0	0	7	
Points	6	10	10	8	0	0	0	34

The health scores were calculated by giving positive points for unhealthy nutritional components and by giving negative points for healthy nutritional components. The health scores are then determined through calculating the sum of all the points.

3.3 Results per sub-questions

The results of the Shopping Scenario and the questionnaire will now be provided. The results are divided per relevant sub-question.

Sub-question 1: Does the consumer buy discounted products with intent?

Graph 1. Amount of intent when buying discounted products

The participants were asked with how much intent they buy discounted products. The result of this question can be viewed above in Graph 1. Out of the 150 participants the average score was 3,61 on a scale from 1 to 7 on amount of intent, with a standard deviation of 1,78. Option 1 indicated the lowest intent to buy discounts, whereas option 7 indicated the highest intent to buy discounts. A lot of participants (30% of the respondents) selected "2", indicating a low intent to buy discounted products, whereas the other options received a more balanced frequency. An average score of 3,61 indicates an overall intermediate amount of intent to buy discounted products.

Sub-question 2: From a consumer perspective, which food categories are the consumers most eager to buy as a result of discounts?

In the second section of the research, there were 6 questions dedicated to sub-question 2. These 6 questions all contained the same structure: a scale question in which a 30% discount was applied to a certain category of food products. The participants had to answer on a scale from 1 to 5 how much this discount influenced their tendency to buy in this food category. The six categories were: Meats, Dairy, Carbs, Snacks, Vegetables and Fruits. The results of these questions shaped the ranking that can be seen in table 5.
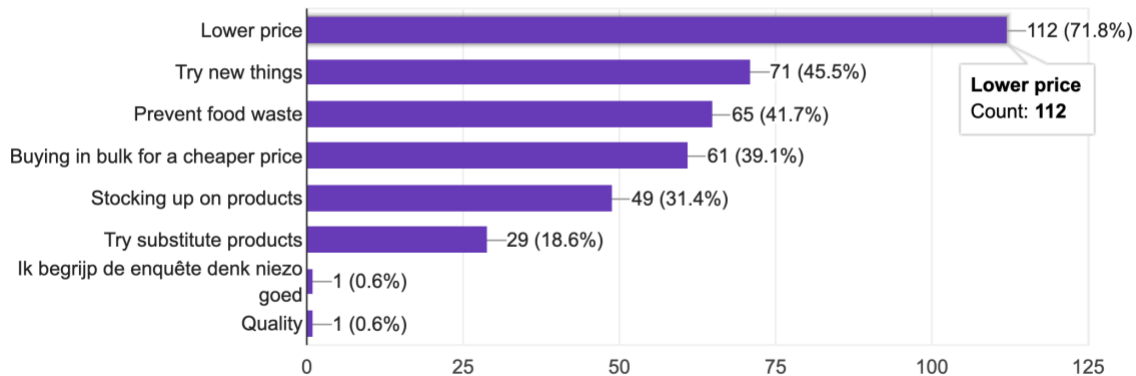
Table 5. Rank of discount influence per category

Rank	Product	Average score	Standard Deviation
First	Snacks	3,27	1,25
Second	Fruits	3,18	1,34
Third	Carbs	3,03	1,24
Fourth	Vegetables	2,96	1,30
Fifth	Dairy	2,58	1,17
Sixth	Meats	2,58	1,41

The table ranks from the strongest influence from discounts, which is Snacks, to the lowest influence as a result of discounts, which is Meats. Therefore, according to the results of the survey, The food category of Snacks is most susceptible to discounts. Snacks were followed closely by fruits. Carbs and Vegetables scored intermediate. Dairy and Meats scored lowest on susceptibility to discounts.

Sub-question 3: With what motivation does the consumer purchase discounted products?

What is your motivation to buy discounted products?
156 responses

Lower price	112 (71.8%)
Try new things	71 (45.5%)
Prevent food waste	65 (41.7%)
Buying in bulk for a cheaper price	61 (39.1%)
Stocking up on products	49 (31.4%)
Try substitute products	29 (18.6%)
Ik begrijp de enquête denk niezo goed	1 (0.6%)
Quality	1 (0.6%)

Lower price
Count: **112**

Graph 2. Biggest motivators to buy discounted products

When the participants were asked what motivated them to buy discounted products, they had 6 options from which they could select one or more options. Also available was an "other" option, in which the participants could write their own reasons to buy discounted products. Unfortunately this option was not utilised to produce useful results. The biggest motivator from the respondents is vividly evident from graph 2, which is to buy discounts due to having to pay a lower price. In the results of this question, the frequency is more reliable than the percentages, since the participants could select more options. Lower price was selected 112 times. This selected 41 times more often than "lower things" at 71. The average interval between the remaining options was 10,5. So lower price had a pre-eminence over the other options.

Sub-question 4: To what extent will a discount influence consumers to buy products, that they would or wouldn't have bought were the products not on discount?

The participants were asked to fill in a Shopping Scenario, in order to find out to what extent a discount influences consumers to buy products, that they would or wouldn't have bought were the products not on discount? The numbers -15 till 40 indicate the healthiness of the products that were present in the Shopping Scenario, a product with a health score of 4 or higher is considered unhealthy. Products with a health score lower than 4 are considered healthy. The health scores were calculated according to the method of the Department of Health which can be found in the methodology (Department of Health, 2011). The percentages indicate the discounts that were available for those products.
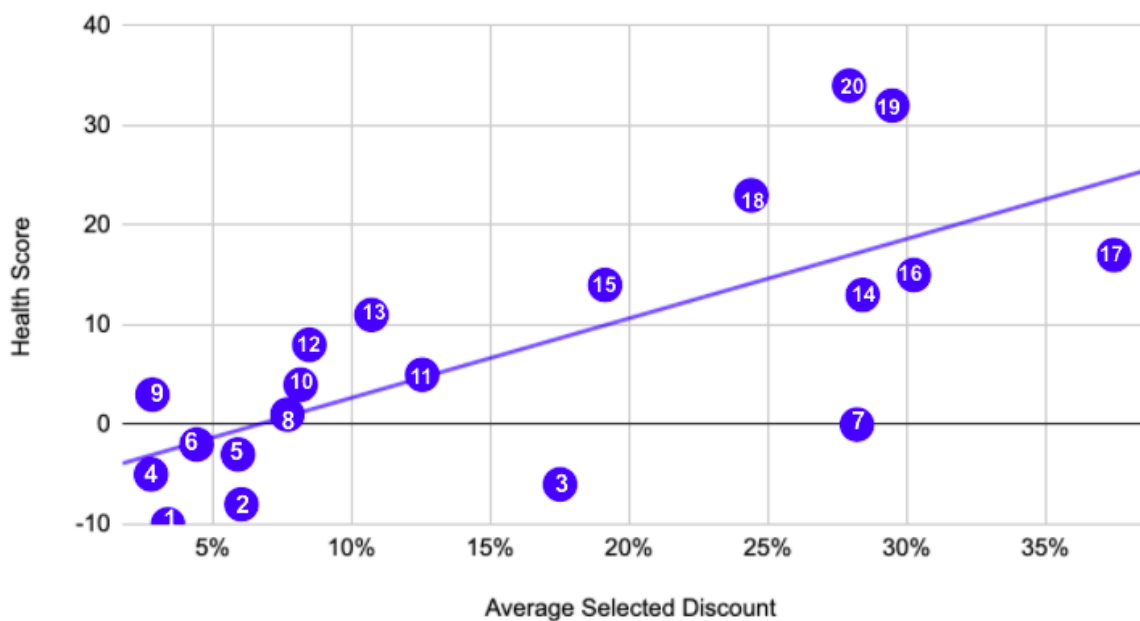
Graph 3 and 4 both describe the same results from the Shopping Scenario. Graph 3 shows the correlation between the health scores of the products that were available in the Shopping Scenario and the average discounts that were selected according to

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maximum willingness of payment considering these products, table 6 shows which dot matches which product. The following correlation is depicted from this graph: when products are entering unhealthy territory, consumers become less willing to pay the full price and would therefore only buy such products when they are put on discount.

Table 6. Product names of dots from graph 3

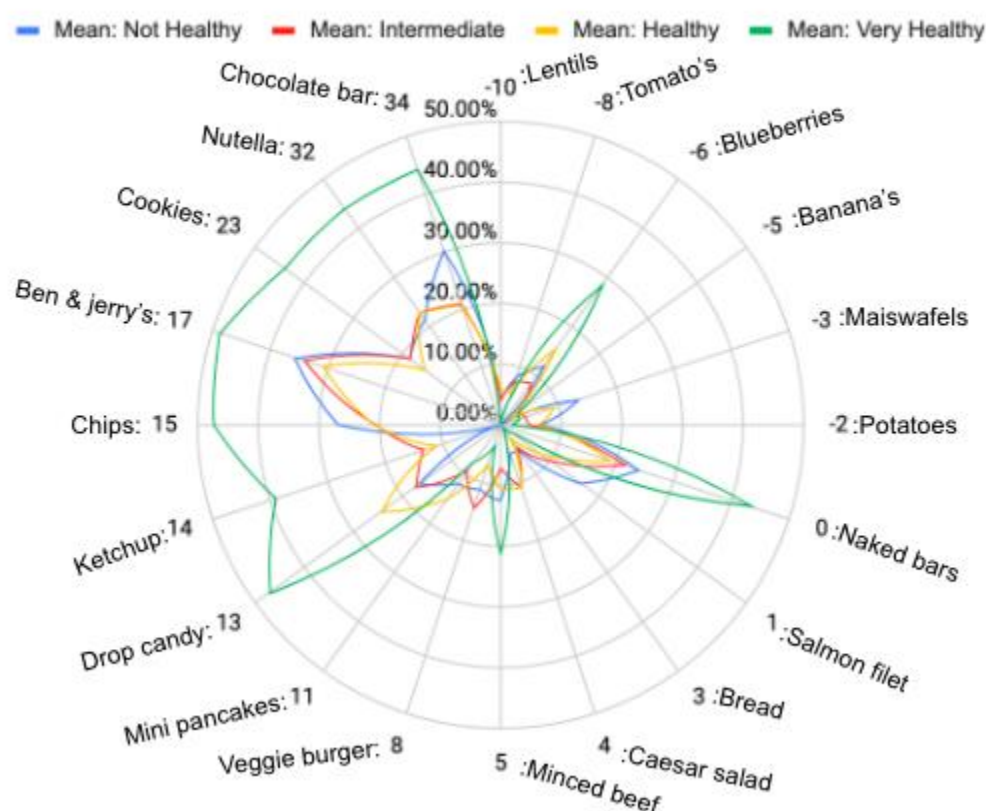| # Dot (graph3):	Product:	Health score:	# Dot (graph3):	Product:	Health score:
P1	Lentils	-10	P11	Minced Beef	5
P2	Tomato's	-8	P12	Veggie Burger	8
P3	Blueberries	-6	P13	Mini Pancakes	11
P4	Banana	-5	P14	Drop Candy	13
P5	Maiswafels	-3	P15	Ketchup	14
P6	Potatoes	-2	P16	Chips	15
P7	Naked bar	0	P17	Ben & Jerry's	17
P8	Salmon Filet	1	P18	Cookies	17
P9	Bread	3	P19	Nutella	32
P10	Caesar Salad	4	P20	Chocolate Bar	34

Graph 3. Health Score vs Average Selected Discount

Graph 4 also shows the results from the Shopping Scenario. However, the results in this graph are displayed into a radar chart; divided according to the demographic question in which the participants had to rate the healthiness of their diet. The line stretching towards a product indicates the average amount of discount that was utilised when selecting this product. The further the line reaches, the more susceptible the products seem to be to discounts. Graph 4 shows that the lines are drawn further towards products with a higher health score (which are unhealthy products), especially with the products like drop candy, chips and Ben & Jerry's. There are almost no lines towards lentils, tomatoes and bananas and also very few lines towards the other healthy products. Thus, indicating that unhealthy products are more susceptible to discounts.

Graph 4 mainly follows the trend of graph 3, which shows that unhealthy products are more susceptible to discounts. However, a dispersion is seen when solely viewing the participants who consider themselves "very healthy". They show to exclusively have the intention to buy unhealthy products once these products are put on a high discount.

Graph 4. Shopping Scenario per perceived level of healthiness of diet

4. Discussion

This chapter will expand on the results through the implementation of critical analysis. The chapter will begin by restating the objectives of the research. These objectives alongside the theoretical framework will then be put into perspective with the results from the research.

4.1 Discussion per sub-question

The main objective of this research was to aid consumers in making dietary conscious purchasing decisions. This is done by researching the influence that discounts can have on the healthiness of one's purchasing decisions.

Sub-question 1: Does the consumer buy discounted products with intent?
The questionnaire question regarding the intention of buying discounted products had the most divided results of all questions. The average level of intent was almost exactly in the middle, between "buy discount with no intent" and "buy discount with a lot of intent". Therefore, sub-question 1 becomes difficult to answer due to the indeterminate nature of these results. Therefore, in order to provide a satisfactory answer to this sub question, information from other questionnaire questions are included. This is done by looking at the motivation question.

The motivation of buying discounted products has relevance to intent, because it is motivation that will eventually lead to intent (Withal, 2009). The biggest motivator for buying discounted products was to buy products for a lower price. When a consumer wants a lower price, it means they want to pay less for the product that they were initially planning to buy. When a consumer comes across such a discount the consumer would benefit. However, the discount is not a prerequisite for purchasing the product.

Another big motivator that got selected often was: "to try new things". When a consumer buys new products as a result of a discount, it would be likely that the decision whether or not the consumer would buy these products is made spontaneously. A consumer is most of the time not aware of all the discounts that are available in a supermarket, exposure to discounted novice products would appear frequently, which consequently leads to impulsive purchasing to "try new things". This impulsivity indicates once again a low tendency to specifically buy discounted products with intent.

However when a consumer looks for products that are about to expire or aim to buy products in bulk, it is a lot more likely that this consumer would specifically look for discounted products. The product being on discount is the primary reason for them to stock up on these products or to buy them in bulk. The same applies for products that are soon to expire. These products are put on discount because they are about to be

expired. The products being put on discount are in these cases the primary reason for the consumer to make the purchase. Yet the options of "buying in larger quantities" and "buying to limit food waste" were selected less often than "lower price" and "try new things". Therefore it can be concluded that the average consumer doesn't buy discounts with intent. (Kamphuis, 2007) created a model that depicted external influences when purchasing food. In the research it was concluded that the store lay out plays a big impact in consumer purchasing behavior. The effectiveness of the discount can therefore also be contributed to the way it is displayed on the top of the initial intent of a consumer to buy a product on discount.

Sub-question 2: From a consumer perspective, which food categories are the consumers most eager to buy as a result of discounts?
(Van Rossum, et al. 2016) showed that dairy and potatoes are the major entities in the Dutch diet. It was also said that the Dutch diet was characterized by having many snacks on top of regular meals. The research showed that the food category that is most susceptible to discounts is the snacks category, which would make sense due to the apparent popularity of snacks in the Dutch diet.

The Dairy category scores the lowest and the carbs category scores about average. (De Boer, et al. 2015) Claimed that the modern Dutch diet is influenced by food trends. For example veganism is a big food trend in the 21 first century. This could explain the low effect that discounts had on meat and dairy. Perhaps dairy is losing it's big share in the Dutch diet.

The Carbs scored average on being influenced by discounts. Carbs being intermittently influenced by discounts could be due to the core characteristics of carbs. They are already quite cheap and they have a far reaching expiration date. Therefore, the discounts would have less effect in making such products more attractive.

The purchase of snacks being the most influenced by discounts shows resemblance to the results of the Shopping Scenario. Snacks are generally unhealthy. The Shopping Scenario showed that the majority of the participants were only willing to purchase most unhealthy products if a discount was involved. Therefore it would make sense for the snacks category to be the most subjectable to discounts.

There is a liability in finding correlations between the questions regarding the food categories and the Shopping Scenario. The Shopping Scenario is based on factual health information whereas the food categories questions are not. For example participant A could think about the chocolate milk that she buys for her children when reading dairy. Whereas Participant B could think about the organic local milk that he consumes every day. The range between healthy and unhealthy is probably the biggest in the category of snacks. Since the research is mainly focused on healthiness, a specified health question regarding the food categories would have been more fitting.

There is however another difference between the questions regarding the food categories and the Shopping Scenario which could be beneficial for the research. Through the questions about the food categories the participants were straight up asked how the discount would influence their decisions. Whereas the Shopping Scenario would have an opposite approach by asking the maxim willingness to pay for each product, or in other words where did the discount have the littlest influence.

These two different approaches of inquiring about the influence of discounts creates useful comparison opportunities. For example, in both the Shopping Scenario and the category questions, discounts were shown to have a high influence on purchasing snacks. However in the Shopping Scenario fruits scored mainly low on being influenced by discounts. Whereas in the category question the entire category scored high for being influenced by discounts. It could be interesting to speculate the cause behind this difference. Could it be the aforementioned perception of health that was absent in the food category question? Could it have anything to do with the prices of the individual products in the Shopping Scenario? Or perhaps something else? All these questions can evoke future research.

Sub-question 3: With what motivation does the consumer purchase discounted products?

(Geurts, et al. 2017) showed that habits play a major role in the diet of Dutch consumers. One of the bigger motivators for buying products on discount was to "try new products". Through trying new products the regular diet of the Dutch can therefore be interrupted. These results, therefore deviate from the research of (Geurts, et al. 2017. Further research can be conducted in order to find the source of this dispersion.

(Hofstede's Insights, 2018) showed that the Dutch diet tends to be fixed. Shopping impulsive discounts can cause alterations in the diet. The biggest motivators for buying a discount was "to get a lower price", "to try new things" or "to prevent food waste". These large motivators could provide enough incentive for a consumer to stray from their regular diet. This indicates that discounts can cause the Dutch diet to become less fixed.

Another objective of this research is to help the consumers save money. The participants showed that a lower price is the most important reason for buying on discount, the second most important reason was to try new products. So it would seem that discounts would therefore lower the price of the Dutch diet. However, buying new products for a low price temporarily could lead to long term dietary changes. For the long term this could even cause the overall cost of the diet to increase, depending on the price of the initial diet. Due to the fact that the main focus of this research is the healthiness of the Dutch diet in relation to discount, further research into the long term cost effects of discounts on the overall diet could be interesting.

The motivation question was put into the survey mainly with the purpose of answering sub question 3. In order to get a grand overview of the different motivators to buy discounts there was the option in which the participants could type their own personal motivators. Unfortunately this option was not utilized to productive results. Which resulted in a narrow overview of the motivators to buy discounted products. Looking back at formulating this question, I think it would have been better to have used an open question entirely, rather than already having the suggestions, which would have provoked more creative responses.

Sub-question 4. To what extent will a discount influence consumers to buy products, that they would or would not have bought were the products not on discount?

The main objective of this research is to help consumers make more health conscious dietary decisions by making them more aware of the psychological influences that supermarket discounts can have on their purchasing behavior. The result of the Shopping survey showed that discounts had little influence on the purchase of healthy products. The participants were willing to pay the full price for these products. Because they were planning to buy the products regardless.

The unhealthy products however were mainly exclusively selected when there was a discount involved. This is probably due to the participants not setting out to buy unhealthy products. This phenomenon only increased with participants who regarded themselves for having a healthy diet. Due to discounts having little influence on the purchasing of healthy products but a significant influence on the increased purchasing of unhealthy products. This correlation suggests that discounts can have a negative influence on the healthiness of the diet of Dutch consumers.

There were two spikes in the radar chart, at -6 (Blueberries) and 0 (Naked bars), that deviated from the overall correlation. These spikes could be caused by health conscious consumers not considering these products to be healthy. Or to be overall such niche products that most consumers have little interest in buying them. Another reason for the spikes could be that these products are relatively expensive compared to the substitute products.

In the Shopping Scenario the questions could have been improved by also asking what the participant perceived to be the healthiness of each of the products in the Shopping Scenario, in order to fully grasp their purchase intention. Which would then allow for a triple comparison: the selected discount, the perceived healthiness and the actual healthiness. Through comparing the perceived healthiness with the actual healthiness, before correlating this data to discounts, the absolute influence of discounts on the healthiness of the Dutch diet would become even more evident.

4.2 Limitations of the research

This research was limited to Dutch supermarket consumers with a focus on the healthiness of diets. This allowed for a detailed analysis of the influence of discounts on the healthiness of the Dutch diet. However, this specific focus also led to a lack of insights in related subjects regarding the research topic.

The supermarket focus causes the results to be less relevant for other food businesses such as restaurants. There is of course resemblance between a supermarket and a restaurant since they both sell food. Yet the fact that a restaurant is more focused on delivering complete meals and also offers a scenic experience of eating. The effect of the discount transcends just the value of the healthiness of the food.

A similar situation applies for the limitation of just Dutch consumers. Even Though the Dutch consumer is represented heavily by internationals, there would still remain uncertainty if the same results would apply for other countries. This uncertainty could be due to for example a different average wage in a country or different political policies regarding supermarkets. Similar studies would be necessary in other countries in order to find out the influence of discounts on the healthiness on their diets.

The main focus of this research was to aid the consumer in making health conscious decisions in regards to discounts. In order to realize this objective a specification in healthiness was essential. Consequently, there was a lack of insight regarding another relevant aspect of discounts: the price. Besides from protecting consumers against the potential health hazards of discounts. Knowing the potential increase of the average price of a diet as a result of discounts would also be a benefit to the consumer. When buying a discounted product causes a long-term change in a diet it can alter the average cost of the diet. Whilst the initial purpose was to get a lower price for purchasing a product. A research that would focus on this unwanted effect of discounts could aid the consumer in also becoming more conscious of the long-term effect that discount can have on the cost of their diet.

5. Conclusion & Recommendations

The objective of this research was to aid consumers in making dietary conscious purchasing decisions. This was done by aiming to find the influence that discounts can have on the healthiness of one's purchasing behavior. In order to provide a well-rounded answer to this question, four sub questions were established.

This research tried to answer the following main question: "*To what extent can supermarket discounts influence the healthiness of Dutch diets?*" Through the help of the answers that this research provided for the sub-questions, the main question will now be answered. The conclusion will be followed up by the recommendations. The recommendations will outline what could be potentially achieved with the conclusion of the research.

In order to answer the main question, four sub questions were established. Sub question 1 indicated that the consumer looks for discounts with intermediate intent. Sub-question 2 showed that the biggest motivator for buying discounted products is "price", followed by "trying new things" and "preventing food waste". Sub-question 3 displayed snacks to be the food category that is most susceptible to discounts. Sub-question 4 found that consumers are allured to primarily buy unhealthy products when on discount. Whereas healthy products are purchased regardless of a discount. The answers to these sub-questions will now be reviewed in order to answer the main question "*To what extent can supermarket discounts influence the healthiness of Dutch diets?*" and to draw the final conclusion.

The Shopping Scenario showed a clear distinction between discount application on healthy and on unhealthy products. This indicates that the influence of discounts is to alter the barrier for purchasing certain products. Overall, it was shown that when consumers buy healthy products they tend to want to pay full price for these products, since they initially would go to the store with the intent of buying these products.

However, when being exposed to unhealthy products the consumer was less likely to be willing to pay the full price for such products, thus these products were only selected as a consequence of discount. Indicating that the discount caused the initial barrier to purchase these products to be lowered. The discount is therefore able to aid the consumers in justifying to buy unhealthy products.
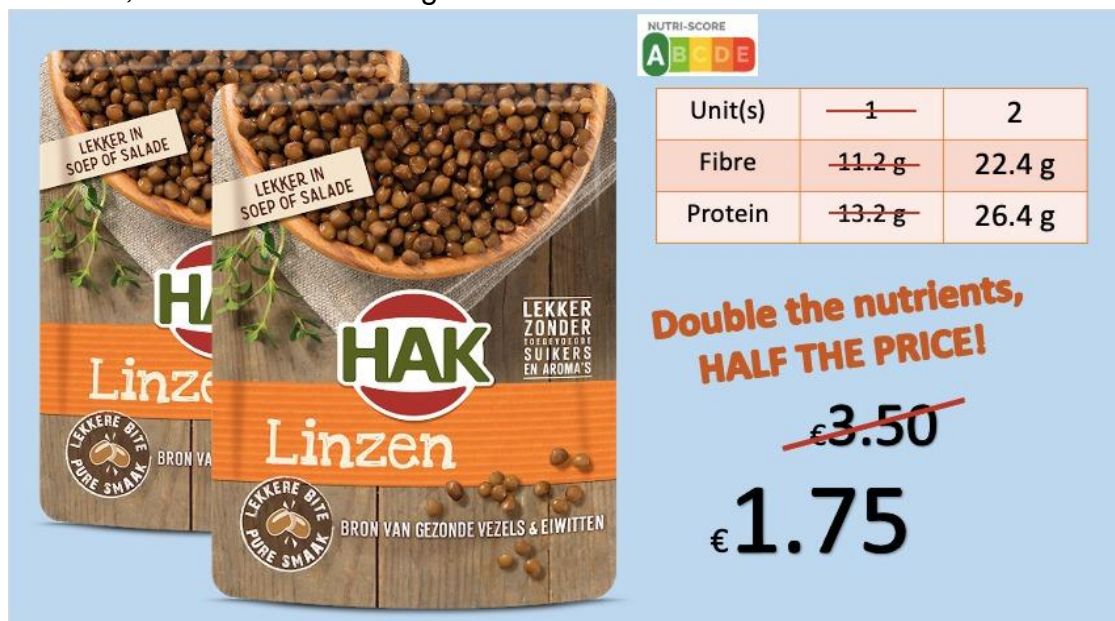
The survey also showed that the tendency to buy discounts as a result of a lower price is more common than going into a supermarket and specifically looking for discounts. So this moment of impulsiveness can further contribute to the barrier being lowered for buying an unhealthy product, since the consumer is not predetermined by prior planning. So the main finding of the research is: discounts have the ability to lower the barrier for consumers to purchase more unhealthy products.

Alternatively the Shopping Scenario could have also shown a higher use of discount when purchasing healthier products. If this would have been the case it would have indicated that the discount would somehow promote the purchasing of healthy products. However the opposite proved to be the case: discount had an adverse impact on the healthiness of the diet of the Dutch consumer. The recommendation will outline a method how discounts can be used to promote health conscious decisions.

This research was written for two target groups: the Dutch consumer and supermarket management. The following recommendations will outline how the conclusion of this research can be implemented for the benefit of both target groups.

Firstly the consumer, the overall dietary effect of discounts on the healthiness of Dutch diets was shown to be negative. Therefore, as a short term recommendation, the Dutch consumer is recommended to stick to a shopping list and to only buy discounted products when these products are also present on their shopping list or similar to the products on their list.

The second recommendation will benefit both the supermarket management and the consumer and is more long-term focused. The second recommendation is to create discounts that are focused on healthiness. In order for the consumer to know that the seeming benefit of a bargain will not have an unwanted effect on the healthiness of the consumer's diet. And for the supermarket management to have an additional marketing tool in their arsenal. For example: "*Double the nutrients, HALF THE PRICE!*", as can be seen in figure 6.

Figure 6. Nutrition based recommendation ad.

Another long term recommendation is the introduction of personalised discounts. Supermarkets can introduce a discount that is tailored to the individual. This can be

done through an algorithm that analyses the purchasing behavior of the individual, which would aid the industry more. Or the personalised discount can be customised through the direct wishes of the customer. For example, the customer can tune the algorithm to focus on the cheapest price, to focus on the healthiest products or to focus on the consumer's favourite products. The concept of personalised discounts is becoming more attainable with the rise of online shopping, making it easier to track purchasing patterns but also offering various ways for the discounts to reach the consumer.

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Appendices

Appendix A: Shopping scenario & follow up questionnaire.

Shopping Scenario

The following questionnaire has been created in order to research the effects of discounts on the quality our diets. Please imagine yourself doing your groceries like you normally would. Try to picture the products and discounts appearing in a brand neutral middle class supermarket. The questionnaire consists out of two parts. The first part is about specific consumer demand in regards to relevant food products. The second part focuses on lifestyle choices. The research uses pictures from ah.nl. This research however applies to all grocery stores in the Netherlands.

Thank you for participating in this research.

1. In order to participate in this research, you will have to have lived in the Netherlands for at least two years. Have you lived in the Netherlands for at least two years?

    Mark only one oval.

    ◯ Yes

    ◯ No (Please don't continue) Other:

    ◯ _____

Banana

Chiquita Bananen
1 kg   Prijs per KG € 1,99

1.⁹⁹   Voeg toe +

Bananen hebben een zachte en zoete smaak. De banaan is de bekendste tropische fruitsoort. De bananen

• Smaak: Bananen hebben een zachte en zoete smaak.
• Bewaren: Buiten de koelkast.

2. How much are willing to pay for this product? *Mark only one oval.*

○ Full price: 1.99
○ 10% discount: 1,80
○ 20% discount: 1,60
○ 50% discount: 1,00
○ I would not buy this product

Tomatoes

AH Snoepgroente tomaat

500 g   Prijs per KG € 5,98

2.⁹⁹   Voeg toe +

Deze fris en sappige cherrytomaatjes zijn onweerstaanbaar zoet, je blijft er van snoepen. Ideaal als gezonde snack voor thuis, op school of onderweg.

• De gezonde snack bij de borrel of als tussendoortje
• Ook lekker op een prikker met bolletje mozzarella
• Bewaren: buiten de koelkast anders verliezen tomaten hun smaak

3.   How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 2.99
○ 10% discount: 2,70
○ 20% discount: 2,40
○ 50% discount: 1,50
○ I would not buy this product

Blueberries

AH Biologisch Blauwe bessen

125 g   Prijs per KG € 23,92

2.⁹⁹   Voeg toe +

Blauwe bessen behoren tot de Vaccinium, dat thuishoort onder de familie van de heidekruidachtigen oftewel Ericaceae. Blauwe bessen komen oorspronkelijk uit Noord-Amerika, maar ze komen ook voor in Nederland. Blauwe bessen zijn rond, zwart-blauw, met een stevige, matte schil en een doorsnede van minimaal 12 millimeter.

4.   How much are you willing to pay for this product? *Mark only one oval.*

⬭ Full price: 2.99
⬭ 10% discount: 2,70
⬭ 20% discount: 2,40
⬭ 50% discount: 1,50
⬭ I would not buy this product

Minced   **beef**

AH Rundergehakt

900 g   Prijs per KG € 5,50

4.⁹⁵   Voeg toe +

Rundergehakt om eindeloos mee te variëren. Natuurlijk voor een gewone gehaktbal, maar ook voor snackballetjes of soepballetjes of gebruik het geruld in pastasaus en ovengerechten.

• Rundvlees
• Bereiding: koekenpan/wok. Rullen ca. 2-4 minuten
• Weetje: je kunt het gehakt rullen zonder boter of olie toe te voegen
• Tip: voeg voor een gehaktbal eens extra smaakmakers als ui, ketjap of verse kruiden toe

5.   How much are you willing to pay for this product? *Mark only one oval.*

⬭ Full price: 4,95
⬭ 10% discount: 4,50
⬭ 20% discount: 4,00
⬭ 50% discount: 2,50
⬭ I would not buy this product

Cola

Coca-Cola Regular
1,5 l   Prijs per LT € 1,53

2.²⁹   Voeg toe +

Coca-Cola is de meest favoriete frisdrank van de wereld. De 1,5L PET is de ideale fles om uit te schenken tijdens de gezellige momenten aan tafel. Bewaar Coca-Cola op een droge schone plaats uit de zon. Coca-Cola smaakt ijskoud het lekkerst.

- frisdrank met plantenextracten
- natuurlijke aroma's
- geen toevoegde conserveermiddelen

6.   How much are you willing to pay for this product? *Mark only one oval.*

- ◯ Full price: 2,29
- ◯ 10% discount: 1,97
- ◯ 20% discount: 1,84
- ◯ 50% discount: 1,15
- ◯ I would not buy this product

Orange juice

AH Vers sap sinaasappel
500 ml   Prijs per LT € 3,98

1.⁹⁹   Voeg toe +

Lekker fris! Onze verse sappen worden iedere ochtend koudgeperst. Door alleen verse ingrediënten te gebruiken en het sap nooit te verhitten blijven vitamines en mineralen maximaal behouden. Vandaag geperst, morgen in jouw koelkast. Zonder toevoegingen, verser & gemakkelijker kan niet.

- Met vitamine C en foliumzuur
- Geniet van een lekker vers & koudgeperst sap op ieder moment van de dag
- Voor ontbijt, lunch of tussendoor

7. How much are you willing to pay for this product? *Mark only one oval.*

- ◯ Full price: 1,99
- ◯ 10% discount: 1,80
- ◯ 20% discount: 1,60
- ◯ 50% discount: 1,00
- ◯ I would not buy this product

Chocolate bar

Tony's Chocolonely Melk karamel-zeezout

180 g   Prijs per KG € 16,06

2.⁸⁹   Voeg toe +

De favoriete reep van het Tony's team en van heel veel fans! Melkchocolade met karamel en een korreltje zeezout: een reep om heel serieus te nemen!

- Romige melkchocolade zoals je van ons gewend bent!
- Fairtrade

8. How much are you willing to pay for this product? *Mark only one oval.*

- ◯ 9. Full price: 2,89
- ◯ 10. 10% discount: 2,60
- ◯ 11. 20% discount: 2,30
- ◯ 12. 50% discount: 1,45
- ◯ 13. I would not buy this product

Chips

Lay's Pomtips

125 g   Prijs per KG € 12,40

1.⁵⁵   Voeg toe +

Heerlijk brosse aardappelstaafjes, op smaak gebracht met een snufje zout

- Bereid met zonnebloemolie
- Bevat 4-5 porties

9. How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 1,55
○ 10% discount: 1,40
○ 20% discount: 1,25
○ 50% discount: 0,77
○ I would not buy this product

Cookies

AH Stroopwafels
12 stuks

1.⁶⁵   Voeg toe +

Deze smaakvolle wafels met roomboter stroopvulling zijn heerlijk bij de koffie of thee! Of op ieder ander moment van de dag.

• Nu een nog grotere wafel is meer genieten
• Bereid met roomboter
• Visite? gegarandeerd succes

10. How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 1,65
○ 10% discount: 1,49
○ 20% discount: 1,22
○ 50% discount: 0,82
○ I would not buy this product

Caesar Salad

AH Maaltijdsalade kip Caesar
450 g   Prijs per KG € 9,31

4.¹⁹   Voeg toe +

Maaltijdsalade met gegrilde kipfiletreepjes, ijsbergsla, romanasla, kaasschilfers, ei, aardappel, knoflookcroutons en caesardressing

• Lekker als lunch of avondmaaltijd
• Dressing is vrij van kunstmatige geur- en smaakstoffen

11.	How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 4,19
○ 10% discount: 3,78
○ 20% discount: 3,36
○ 50% discount: 2,10
○ I would not buy this product

Veggie burger

Vegetarische Slager Mc2 burger

2 stuks   Prijs per KG € 16,56

2.⁶⁵   Voeg toe +

In de wetenschap dat lecker eten geen hogere wiskunde hoeft te zijn, werd onze mc burger geboren. Ontwikkeld aan de hamburgerstraat in utrecht, in navolging van einsteins gedachtegoed.

- Bereiden: in de pan of op de bbq
- Vegetarisch, rijk aan eiwit
- Tip: bouw een burger met je favoriete toppings
- Voor alle vleesliefhebbers

12.	How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 2,65
○ 10% discount: 2,39
○ 20% discount: 2,12
○ 50% discount: 1,33
○ I would not buy this product

Bio veggie burger

AH Biologisch Groenteburger

160 g   Prijs per KG € 18,69

2.⁹⁹   Voeg toe +

Een smaakrijke burger gemaakt van biologische groente. Een licht en gezond alternatief met maar 144 calorieën per burger.

- Bevat maar liefst 74% biologische groenten
- Met biologische wortel, mais en paprika
- 179 calorieën per 100 gram
- Gemakkelijk te bereiden

13. How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 2,99
○ 10% discount: 2,69
○ 20% discount: 2,39
○ 50% discount: 1,50
○ I would not buy this product

Salmon filet

AH Zalmfilet

ca. 170 g   Prijs per KG € 25,99

4.⁴²   Voeg toe +

Stevige zalmfilet uit het koele, zuivere water van de Noorse fjorden. Lekker, veelzijdig en gemakkelijk klaar te maken in koekenpan, oven of op de BBQ of grill.

- Met een heerlijke, pure smaak
- Rijk aan omega - 3 vetzuren
- Met MSC-keurmerk, oftewel verantwoord gekweekt met zorg voor de zalm en voor natuur en milieu

14.

14. How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 4,42
○ 10% discount: 3,98
○ 20% discount: 3,54
○ 50% discount: 2,21
○ I would not buy this product

Nutella

Nutella Hazelnootpasta

400 g   Prijs per KG € 7,98

3.¹⁹   Voeg toe +

Nutella, hazelnootpasta met cacao

- s Werelds nummer 1 hazelnootpasta
- Meer dan 50 jaar ambachtelijke kennis

Andere soorten

15. How much are you willing to pay for this product? *Mark only one oval.*

- Full price: 3,19
- 10% discount: 2,87
- 20% discount: 2,55
- 50% discount: 1,60
- I would not buy this product

Náked bar

Nakd. Pecan pie notenreep met fruit

4 stuks   Prijs per KG € 22,07

3.⁰⁹   Voeg toe +

Deze onweerstaanbare en natuurlijke fruitreep van Nakd is gemaakt van dadels, pecannoten en amandelen. Het is een verantwoord en super Yummy tussendoortje voor iedereen.

- 168
- Erg lekkere repen door de natuurlijke smaak van gedroogd fruit en noten
- Geen suikers, kleur of smaakstoffen toegevoegd
- Bron van vezels en weinig verzadigd vet

16. How much are you willing to pay for this product? *Mark only one oval.*

  ◯ Full price: 3,09
  ◯ 10% discount: 2,78
  ◯ 20% discount: 2,47
  ◯ 50% discount: 1,55
  ◯ I would not buy this product

Ben and Jerry's Ice Cream

Ben & Jerry's Chocolate fudge brownie classic ijs

465 ml   Prijs per LT € 13,53

6.²⁹   Voeg toe +

(h)eerlijk chocoladeroomijs met chocolate fudge brownie chunks, afkomstig uit de greyston-bakkerij in new york. Een superdeluxe chocoladecreatie dus!

- Ben en jerry's chocolate fudge brownie, fairrukkelijk chocoladeroomijs
- Ijspint met grote chocolate fudge brownie chunks
- Deze pint ijs bevat fairtrade-gecertificeerde ingredienten
- Kosher en halal gecertificeerd ijs

17. How much are you willing to pay for this product? *Mark only one oval*

  ◯ Full price: 6,29
  ◯ 10% discount: 5,66
  ◯ 20% discount: 5,03
  ◯ 50% discount: 3,15
  ◯ I would not buy this product

Ben Jerry's Light

Ben & Jerry's Ijs light Moophoria choco cookie dough

500 ml   Prijs per LT € 12,88

5.⁹⁹   Voeg toe +

Bestel nu de moo-phoria chocolate cookie dough pint! Alle fairrukkelijke chunks en swirls die je van ben en jerrys gewend bent, maar dan met 50% minder vet dan vergelijkbaar schepijs in de supermarkt!

- Zowel fairtrade, kosher en halal gecertificeerd
- Light ijs gemaakt zonder kunstmatige suikervervangers
- Nu in verpakking met 40% minder plastic
- Ideaal als toetje of met een dekentje op de bank

18.   How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 5,99
○ 10% discount: 5,39
○ 20% discount: 4,79
○ 50% discount: 3,00
○ I would not buy this product

Heinz Ketchup

Heinz Tomaten ketchup

605 ml   Prijs per LT € 3,79

2.²⁹   Voeg toe +

Geen andere ketchup Smaakt zoals heinz. De onmiskenbare geliefde Heinz smaak komt van onze zongerijpte tomaten, samen met onze passie en kennis, die ons recept zijn unieke smaak geven.

• De ketchup die je van Heinz gewend bent in een knoeivrije knijpfles
• Zonder conserveermiddelen. Alleen natuurlijke smaakstoffen.
• Vele beschikbare formaten

19.   How much are you willing to pay for this product? *Mark only one oval.*

○ Full price: 2,29
○ 10% discount: 2,06
○ 20% discount: 1,83
○ 50% discount: 1,15
○ I would not buy this product

Guinness Beer

Guinness Beer
0,5 l   Prijs per LT € 4,10

2.⁰⁵ Voeg toe +

Guinness is een krachtig Iers bier dat wordt gebrouwen uit gebrande mout en heeft een hoog hopgehalte.

* **Categorie:** Rijk & Donker
* **Soort, Smaak:** Gebrande koffie, bittere afdronk, |Zoet:**|Zuur: *|Bitter: ***|Kruidig: *|
* **Alcoholpercentage:** 4,2%
* **Lekker bij:** Oesters, Stoofvlees
* **Brouwerij, plaats:** St. James Gate, Dublin, Ierland

20.   How much are you willing to pay for this product? *Mark only one oval.*

Full price: 2,05
10% discount: 1,85
20% discount: 1,64
50% discount:1,03
I would not buy this product

Brand Alcohol Free Beer

Brand IPA 0.0% fles
6 x 0.30 l   Prijs per LT € 3,38

6.⁰⁹ Voeg toe +

Brand IPA 0.0% is hoppig, citrusachtig en fris. De fruitige geuren ontstaan door het dryhoppen met cascade, amarillo en mosaic hop en hebben een zachte bitterheid.

* **Smaak:** fruitige geuren en een zachte bitterheid
* **Categorie:** fruitig en hoppig
* **Alcoholpercentage:** 0,0%
* **Brouwerij, plaats:** Brand brouwerij, wijlre, Nederland

21.   How much are you willing to pay for this product? *Mark only one oval.*

Full price: 6,09
10% discount: 5,48
20% discount: 4,87
50% discount: 3,05
I would not buy this product

22.	What is your motivation to buy discounted products?

Tick all that

☐ Lower
☐ Try new
☐ Prevent food
☐ Buying in bulk for a cheaper
☐ Stocking up on
☐ Try substitute
☐ Other:_____

23.	With how much intent do you buy discounted products?

Mark   only   one   oval.

	1	2	3	4	5	6	7	
I don't intent to buy discounts	◯	◯	◯	◯	◯	◯	◯	I specifically look for discounts

Questionnaire

Thank you very much for completing the Shopping Scenario. A few demographic questions will now follow to determine the variety of people that have taken part in the research.

24.	What is your age? *Mark only one oval.*

◯ 12-18
◯ 18-25
◯ 25-35
◯ 35-45
◯ 45-55
◯ Older then 55

25.	What is your gender? *Mark only one oval.*

◯ Male
◯ Female
◯ Other
◯ I'd rather not say

26. What is your nationality?

_____

27. What is your height in meters? *Mark only one oval.*

⬭ 1,30-1,40
⬭ 1,40-1,50
⬭ 1,50-,160
⬭ 1,60-1,70
⬭ 1,70-1,80
⬭ 1,80-1,90
⬭ 1,90-2,00
⬭ Taller than 2,00 meters

28. What is your weight in kilos? *Mark only one oval.*

⬭ 40-50
⬭ 50-60
⬭ 60-70
⬭ 70-80
⬭ 80-90
⬭ 90-100
⬭ 100-110   110-120   more
⬭ than 120 kilos
⬭ I'd rather not say

29. How often do you exercise in a week? *Mark only one oval.*

⬭ 0 Times
⬭ 1 Times
⬭ 2 Times
⬭ 3 Times
⬭ 4 Times
⬭ More than 4 times

30.   Do you smoke? Mark only one oval.

◯ Yes
◯ No

31.   Do you have a job? *Mark only one oval.*

◯ Yes, full-time
◯ Yes, part- time
◯ No

32.   How many glasses of alcohol on average do you have a week? *Mark only one oval.*

◯ 0
◯ 1-3
◯ 3-6
◯ 6-9
◯ 9-12
◯ More than 12

33.   How healthy would you rate your lifestyle?

Mark only one oval.

	1	2	3	4	5	
Very unhealthy	◯	◯	◯	◯	◯	Very healthy

34.   How healthy would you rate your diet?

Mark only one oval.

	1	2	3.	4	5	
Very unhealthy	◯	◯	◯	◯	◯	Very healthy

35.   On a scale from 1-5 how would you say a 30% discount would influence your decision on fruits?

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

36.   On a scale from 1-5 how would you say a 30% discount would influence your decision on dairy?

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

37.   On a scale from 1-5 how would you say a 30% discount would influence your decision on meats?

Mark only one oval.

	1	2	3	4	5	
Not at all	◯	◯	◯	◯	◯	Very much

38.   On a scale from 1-5 how would you say a 30 % discount would influence your decision on vegetables?

Mark only one oval.

1   2   3   4   5

| Not at all | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | Very much |

39.   On a scale from 1-5 how would you say a 30% discount would influence your decision on snacks?

Mark only one oval.

       1   2   3   4   5

40.   On a scale from 1-5 how would you say a 30% discount would influence your decision on carb dense products (pasta, rice, etc)?

Mark only one oval.

| | 1 | 2 | 3 | 4 | 5 | |
| Not at all | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | Very much |

Thank you for your participation!

The end

Appendix B: Checklist Report Writing
Checklist Report Writing

Name: Class:

    Date:

Title report:

1. Use of English:
☒ Does not contain more than 3 grammar errors, spelling mistakes or typos per 1000 words*
   When more than 3 mistakes per 1000 words are found, the report will be marked a fail.
☒ Contains correct punctuation*
☒ Is attuned to the chosen target group (appropriate style)*
☒ Shows a functional and business-like writing style*
☒ Is not written in the "I" form*

2. The report:
☒ Report is properly bound, no staples (hard copy)*
☒ Is free of plagiarism* (check exam regulations)

3. The cover:
☒ Displays the title
☒ Author(s) is/ are mentioned

4. The title page:
☒ Title is specific*
☒ Author(s) is/ are mentioned in alphabetical order*
☒ Date and place of publication are mentioned*
☒ The sponsor/orderer of the report is mentioned*

5. The preface:
☒ Contains personal reason for writing
☒ Contains acknowledgement ("I" form permitted in the preface)

6. Table of contents:
☒ All parts of the report are numbered*
☒ The summary and appendices are included
☒ Table of contents is clear
☒ Page numbers are consistent

7. The summary:
☒ Is a concise version of the entire report
☒ Contains conclusions
☒ Does not contain personal opinions
☒ Is well structured
☒ Is written business-like
☒ Follows the table of contents

8. The introduction:
☒ Is chapter 1*
☒ Invites the reader to read
☒ problem demarcation and justification are clear and specific*
☒ The problem context is clear and to the point*
☒ The aim of the research and the report is clear and specific*   . .

☒ Research methods/ data collection are described *
☒ The function of the chapters in the report is concisely describe

9. The (construction of the) core:
- Chapters, paragraphs and subparagraphs are numbered and clearly structured (with a maximum of three levels)*
- Enumeration levels are clearly distinguishable*
- Chapters and (sub) paragraphs have a fitting title
- A chapter covers at least one page
- New chapters start on a new page
- Sentences are typed in sequence, without hard return within the paragraph
- Figures are numbered and have a fitting title, which is put below the figure.*
- Tables are numbered and have a fitting title, which is put above the table*
- Figures and tables are referred to in the text*
- Each appendix is specifically referred to in the content
- Pages are numbered*
- Pages have a functional layout

10. The discussion of results:
- Contains a review of relevant sources
- Valid argumentation is provided
- Contains a critical evaluation of own findings

11. The conclusions and recommendations:
- The conclusions are based on relevant facts and / or discussion
- The recommendations are based on relevant facts and / or discussion
- Does not contain any discussion or information that does not appear elsewhere in the report text*

12. References:
- The text is written according to the APA-rules * (check intranet Library)

13. The list of sources:
- Is drawn up according to the APA-rules* (check intranet Library)

14. The appendices:
- Are all numbered
- Each have an appropriate title
- Do not contain the author's own analyses.