
# WHO IS NEXT TO YOU IN LINE?

*Towards a Typology of Today's Grocery Consumer*

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Nadia Aspen
naspen15@student.aau.dk

# ABSTRACT

There is very limited knowledge in terms of grocery consumer characteristics in Sweden and grocers are failing to meet the demands of their customers. This is due to a large product focus instead of focusing on the consumer. In order to address the issue, this project attempts to segment the Swedish grocery consumers based on their attitude and shopping behavior. Moreover, demographic factors are considered to appropriately identify the segments characteristics.

The first part of the project emphasizes the methodological aspects of conducting research, this relates to research paradigm, research method, research design and literature search. Paradigmatic stance for this project is founded is the functionalist approach, which is primarily concerned with objective and generalizable studies. A survey method in the form of self-administrated questionnaires was adopted. They were distributed throughout 8 various Facebook groups which contributed to a probability sample of 270 respondents.

The literature was extracted trough a systematic-literature search which followed several various procedures suggested in order to cover a large scale previous research in the area. The keyword based search generated a final folder of 14 articles which meet the inclusion/exclusion criteria's.

Previous to reviewing the literature on grocery typologies, various theoretical issues concerning segmentation was clarified. Findings here suggested that segmentation is primarily conducted on the basis of demographics, geographic psychographic and behavioral factors. However, after reviewing the literature on grocery segmentation, scholars suggested that segmenting grocery consumer differed slightly from the general shopper typologies since it is an essential good.

Various constructs had been developed with the exclusive cause of segmenting grocery consumers. From these various framework 7 factors were retrieved to develop the measuring construct: shopping enjoyment, price checking, comparison shopping, catalogue usage, product evaluation, store evaluation and unplanned purchasing. An additional scale was developed for food culture, which had not been previously explored, however well argued for as a factor by various authors.

For the analysis, a factor analysis initially confirmed scale measures with the removal of two

items. Following, a hierarchal clustering method was used to determine the number of clusters. Ward's method suggested a three-cluster solution. In order to divide the cases into segments a K-Means cluster analysis was conducted. Generating the clusters: involved shoppers, balanced shoppers and comfortable shoppers. The analysis suggested that 6 out of the 8 factors reached a significant level for contribution to the difference amongst the segments: these were: shopping enjoyment, price checking, catalogue usage, store evaluation and unplanned purchasing.

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# 1. Introduction

The grocery industry is a continuously growing market in Sweden. Grocery retailing accounts for almost half of the total retail market in the country, with an estimated share of 48,2% (Euromonitor, Grocery vs Non-grocery, Historical, Retail Value RSP excl Sales Tax, % breakdown, 2017). Furthermore, there has been an increase in sales during the last few years (Svensk Dagligvaruhandels Kvartalsrapport Q4 2016) and the total turnover 2016 was estimated to 311 097,4 (M) SEK.

The increased consumption however was slightly weaker in 2016, where the development and number of hired people did not reach the same level as it had in the recent years. According to Svensk Dagligvaruhandel (2017a) there is currently a lack of customer focus amongst the grocery retailers. There is therefore an expressed demand for knowledge regarding customer insight on values and shopping behavior. The 30th of January 2017, the government released a proposition about a national grocery strategy where the main priority was consumer behavior research (Svensk Dagligvaruhandel, 2017c).

Sweden's grocery industry is highly competitive and mature. Few large players dominate the market and the largest, ICA represents 39% of the total industry, followed by Coop (15%) and Axfood (14%) (Euromonitor, Grocery Retailers in Sweden, 2017). This means that the three largest companies make up 69% of the total market, making strategy and constant performance significant. Moreover, the dominating companies are characterized by "…similar positioning in terms of pricing, store location, loyalty schemes and product offering" (Euromonitor, Grocery Retailers in Sweden, 2017, p.3).

Trends are according to Euromonitor (Grocery Retailers in Sweden, 2017) changing in the market. A higher demand for luxury goods, an increased preference for organic and healthy food and an increased interest for private label brands are amongst some of the observed trends in 2016. Moreover, the retail format preference is changing for Swedish grocery consumers. Smaller retail formats are struggling while convenience and internet stores are growing segments (Euromonitor, Grocery Retailer in Sweden, 2017; Svensk Dagligvaruhandels Kvartalsrapport Q4 2016). The customer preference and behavior is changing the industry and knowledge related to creating customer value is limited. Therefore, further research could contribute to a higher awareness of customer demands, thus enables the grocery retailers to found their strategy from a customer perspective and maximize performance.

## 1.1 Problem formulation

Customer insight within the grocery retail industry is an area both emphasized by the government in Sweden (Svensk Dagligvaruhandel, 2017b) and significant with regards to the changing customer preferences which have been observed in the country. Moreover, the food retail industry has expressed a positive attitude towards the new customer focus plan (Svensk Dagligvaruhandel, 2017c). Even so, there is lack of research conducted in the area. There are currently no research papers relevant to this subject for Sweden and very few studies have focused on specific areas of the industry, such as "*The Buying of Private Brands and Manufacturer Brands in Grocery Retailing*" (Johansson and Burt, 2004) and "*Vegetable consumption and consumer attitudes towards organically grown vegetables"* (Ekelund, 1989). On the other hand, this research area has been explored in other markets, i.e. the United States, China and the United Kingdom (Katsaras et al, 2001; Veeck and Veeck, 2000; Clarke, 2000). In these studies, the emphasis has been on creating a more holistic interpretation of customer segments in the grocery retailing industry.

Segmenting a market is a *"...methodology that attempts to discover the classes in which the consumers can be naturally grouped, according to the information available. It is precisely using data related to consumers' needs and expectations: behavioural characteristics, that the usefulness of the segmentation can be maximized, by pinpointing what the customers are seeking*" (Vellido et al, 1999, p. 303). Hence, research dedicated to increasing knowledge about the Swedish grocery customers would generate valuable insights to grocery retailers thus allow for adopting a more customer focused approach to strategy. Swedish food retailers can henceforth achieve higher efficiency after the stagnated growth last year and gain the customer insight necessary to develop suitable strategies.

Kim et al. (2006) suggests that marketing strategy development is a central objective of customer segmentation. By classifying customers by their potential value and preferences, it is possible to target the segments with specific target marketing strategies. Thus, this study will aim at creating a more profound understanding of the current shopping patterns of grocery customers in Sweden. A shift in behavior and lack of knowledge has left the grocery retail industry with a high product focus instead of a customer focus.

## 1.2 Research questions

The aim of this research is to fill the existing gap in the literature on customer segmentation

within the food retail industry in Sweden. The previous arguments lead to the following research questions:

*1. Which are the existing customer segments in the grocery industry in Sweden?*

*2. What are their grocery shopping habits and demographic characteristics?*

## 1.3 Project outline

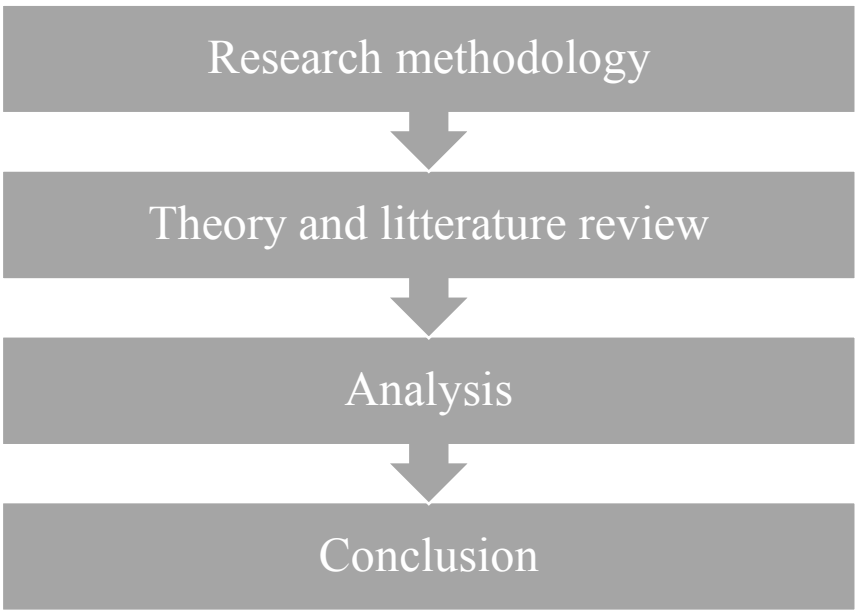


*Figure 1. Project outline*

# 2. Research methodology

In research, it is important to clarify the underlying philosophical assumptions which forms the researchers approach to a problem. Thus, this chapter will elaborate on the methodology of this research paper and found as a basis for assessing my approach on conducting research and interpreting results. By doing this, readers are presented with a clearer view on the ontological and epistemological assumptions of the researcher and guided through the research process.

> *"...every field of research is characterized by a set of common understanding of what phenomenon is being studied, the kinds of questions that are useful to ask about the phenomenon, how researchers should structure their approach to answering their research questions, and how the results should be interpreted. These common characteristics constitute a paradigm." (Kuada, 2009, p.5)*

Paradigmatic positions are typically used pure, situational or pragmatic (Kuada, 2009). The purist will argue that paradigms are inconsistent interrelated and therefore, mixing them is unconventional. One with a purist stance would only apply one paradigmatic position for a specific research. However, other researchers argue that it is possible to mix paradigms since research is concerned with several aspects, thus, believe that approaching them in the appropriate situational manner will contribute to the best results. These are referred to as situationalists and will typically adopt different paradigms for different stages of the research (Kuada, 2009). Finally, there is the pragmatists, which have a contemporary focus. For this position, the main focus will be to best solve the research problem at hand and less focused on the underlying methodological assumptions (Kuada, 2009). The nature of this research problem is to generate a structure to a social phenomenon. Moreover, one research method will be used to generate a solution to this. Thus, the pragmatic position obtained in this research will be of the purist stance.

The most widely used framework for approaching the social sciences paradigmatic debate is Burrell and Morgan's (1979) four-paradigm solution. According to the authors of the research, clarifying the underlying social view of the social world is a way of providing a map of reference in which the researcher personal frame is distinguished. Thus, explain why the problem is approached in a particular way and theoretically founded. The four paradigms are structured in accordance to subjectivity, objectivity, radical change and regulation. The subjective/objective discussion is concerned with the philosophical assumptions about the

nature of science. Aspects discussed are (Burrell and Morgan, 1979):

| **Ontology** |
| --- |
| *"assumptions which concern the very essence of the phenomena under investigation" p. 1* |
| **Epistemology** |
| *"assumptions about the grounds of knowledge" p.1* |
| **Human nature** |
| *"the relationship between human beings and their environment" p.2* |
| **Ideography** |
| *"the way in which one attempts to investigate and obtain "knowledge" about the social world" p.2* |

*Figure 2. Philosophical assumptions about the nature of social science*

Furthermore, the radical change and regulation debate is founded in assumptions regarding the nature of society. The dimension of **radical change** is concerned with conflict and aims to investigate contradiction. According to Burrell and Morgan (1979) this dimension focuses on the possibilities of what can be rather than existing structures. On the contrary, **regulation** acknowledges that there are structures which can be defined in society. The dimensions seek to maintain unity and focus on what is regular rather than contradicting. (Burrell and Morgan, 1979)

Founded within these assumptions, Burrell and Morgan (1979) distinguished four paradigms which will cover the nature of the sociological positions. The four-paradigm solution is illustrated in figure 3.

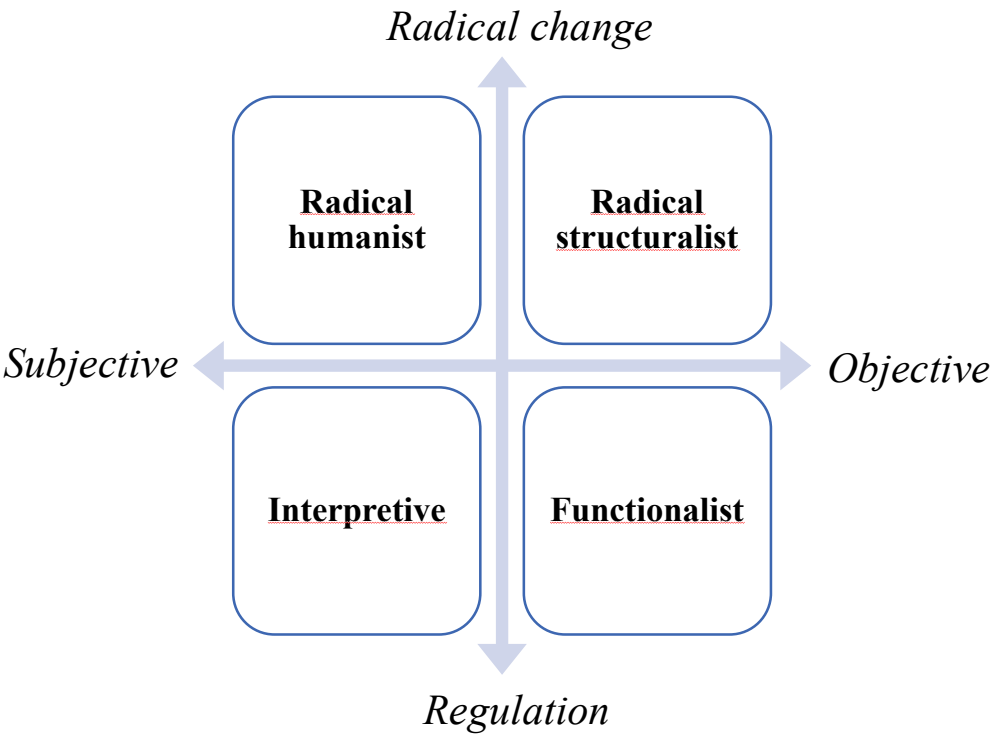


*Figure 3. Paradigms (Own illustration based on Burrell and Morgan, 1979)*

## 2.1 Applied paradigm

This thesis aims at finding regularities and structure in society. Moreover, assumptions related to the nature of science is that they can be obtained objectively and generate knowledge related to the order of society. With these foundational beliefs, the paradigmatic stance originates in the functionalistic perspective.

The functionalist paradigm is distinguished as the search for order and attempts to understand social constructs of society. This view beliefs in regulation and the fact that relationships in the social world can be objectivity approached and exists outside of consciousness. Mapping out characteristics of consumers and segmenting the food retail market is a problem formulated with this exact intention. The research question itself is formulated to seek for regularities in a social construct. Moreover, the approach to the subject in question is founded in theories regarding the lack of understanding a social phenomenon due to shortage of focus within this particular area.

In order to better understand the more profound philosophical assumptions related to the

paradigm in which is project is founded, the ontology, epistemology, human nature and methodology will be discussed in relation to how the functionalist recognizes them.

The ontological stance of the functionalist is realist. With the realistic view is defined as an objective and is a phenomenon which is existing in the world and thus not a subjective view of individual consciousness. In terms of researching the segments in the Swedish food retailing industry it is already predetermined in relation to the research aim that the ontological beliefs are of subjective nature and that the view on the social reality is that order and structure is the characteristic defined. The nominalist does not believe in generalization and structure thus defining utility by segmenting grocery consumers with this paradigmatic stance would be unreasonable.

Further, the epistemological beliefs, which is the aspect related to where knowledge is founded and interpreted, is in the functionalistic paradigm of positivistic nature. Here, the research is characterized by the understanding that knowledge is obtained from searching for regularities and relationships thus allows for segmentation of different groups of consumers. Which the anti-positivistic researcher contradicts, since they reject the fact that science can generate objective findings, and can only be understood from the aspect of the individual. This project will therefore understand the individual responses of knowledge obtained as something that can be structured in order to generate a holistic understanding of the social structure.

Additional philosophical beliefs associated with the functionalistic paradigm is the debate of the human nature. While the voluntarist argues for individual autonomy, the determinist argues that decisions are predetermined by external factors. I believe that grocery consumption is determined by both environmental and situational factors and not created autonomously by the individual consumer and unrelated to social structures. Thus, the view adopted is of deterministic nature.

The last philosophical debate is between the ideographic and nomothetic nature of research, which is related to the methodology the researcher adopts to gather knowledge. The two angels discussed here are ideographic and nomothetic. Ideographic research attempts to understand the individual in a profound manner in order to generate a subjective situational understanding to a phenomenon. Thus, the method adopted in this type of research is typically qualitative and

not concerned with a systematic and structured data collection technique. However, nomothetic research methodology is quantitative and stresses standardized and structured collection method in order to obtain knowledge that is objective and unbiased by an unstructured approach. In order for this project to generate an understanding of grocery consumer segments the research method will be quantitative and follow a structured survey method in order to minimize the researcher bias and create clusters that are defined by the same measure.

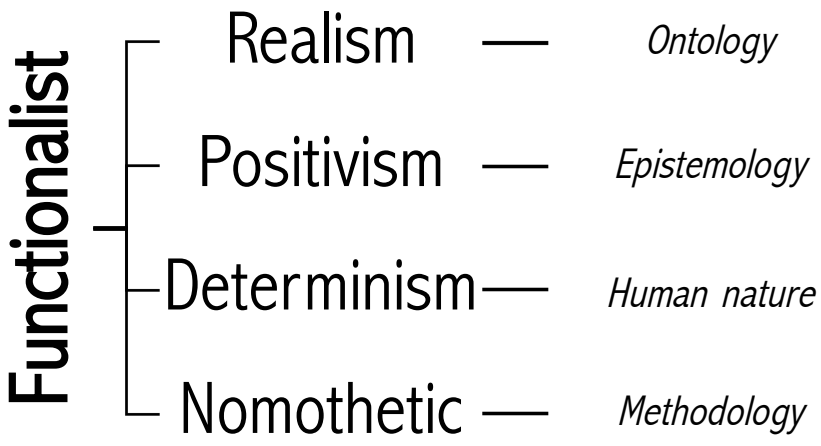


*Figure 4. The functionalist paradigm (own illustration based on Burrell and Morgan, 1979)*

## 2.2 Research method

In the literature, typically two different approaches to research is discussed (Saunders et al, 2011; Cooper and Schindler, 2014), inductive and deductive. Cooper and Schindler (2014) suggests that deductive research has a conclusive emphasis while the inductive is less emphasized with conclusions and focus on singular facts. Saunders et al. (2011) explains that deduction is of positivistic nature and induction the interpretive. In this research, which approaches research, takes the form of deduction. Additional aspects which are important in deductive research is that the conclusions drawn are true and valid, thus the facts need to be proven significant and measured with valid measurements. Hence, the measurements applied in this study will be influenced by previous research conducted in the area that has been proven to be valid. Moreover, tests will be performed in a statistics program and only significant conclusions will be accepted based on the results.

The research method is according to Cooper and Schindler (2014) founded in the type, purpose, time-frame scope and environment of the research. The purpose of this research is descriptive; thus, the focus is mainly on quantitative data and drawing of conclusions based on this.

Saunders et al. (2011, p.140) explains that "… descriptive research is to portray an accurate profile of persons, events or situations". In the case of this particular research, profiling of persons, more specifically grocery shoppers in Sweden, is the objective. In order to obtain the data necessary for this research, a data collection will be approached with a survey method.

The survey method is a standardized tool which allows for easy comparison. Survey is a quantitative approach which according to Saunders et al. (2011) typically is allied with a deductive research approach. A survey method is suitable to collect large datasets for descriptive research in order to explore underlying similarities and dissimilarities of the general population. Data from this type of research method is easy to analyze in statistics programs in order to identify relationships. By adopting the right sampling technique, which should be representable, survey research can be generalizable for the whole population (Saunders et al. 2011).

For the survey method, a questionnaire will be developed for this research. A questionnaire is according to Saunders et al. (2011) a good tool for studying attitude and general opinions which is why is considered appropriate for this line of research. It can be either self-administrated or interviewer-administrated, self-administrated is suitable for close-ends questions which will be the question design for this research. Out of the various self-administrated questionnaire variations there are different opinions on which method will receive the most representable responses. In Saunders et al. (2011) evaluation of self-administrated questionnaires, the internet/intranet-mediated questionnaire has the highest probability for receiving "the right" respondents. Using the internet, the response rate however is expected to be quite low, around an 11% response rate (Saunders et al, 2011).

## 2.3 Research design

### *2.3.1 Survey construct*

The research survey followed a three-stage structure, with a total of 57 individual questions. Inclusion of these stages are based in segmentation theories and the majority of the questions are based in previous research.

The first stage consisted of simple demographic questions related to gender, age, relationship status, highest education completed, primary occupation, income and size of household. All were measured on multiple choices questions, with predetermined levels in order to allow for

better categorizations. However, with the exception of age, which was measured with an open-end question in order to develop suitable categorizations in the analysis later.

The second stage of the survey included categorization items related to grocery shopping habits. These were included, not to form as a basis for clustering consumers, but in order to better describe their common shopping traits in a subsequent manner. Question in this section were primary about shopping trip characteristics. I.e. distance traveled, shopping trip time, store format preference and cross-shopping habits.

The third stage of the survey consisted of the clustering variables which formed as the bases for determining the consumer clusters. Measured included in this stage was constructed primary with validated and pre-tested scale items. Mortimer (2012) developed a framework including a large set of factors suggested to segment grocery consumers specifically. The measurements had been tested in a previous study as well, providing extra support for the segmentation approach as a reliable construct (Mortimer, 2012).

Mortimer (2012) initially developed the construct to create a typology of male grocery shoppers, thus 5 items related to the factor "shopping responsibility" is aimed at exclusively a male sample selection. Since this study aims at generating a typology of both men and female shoppers combined, this factor was deleted from the adopted construct. Out of the original 71 items, this left 66 items for incorporation to the study. The factor categories in the construct consisted of: shopping enjoyment, comparison shopping, price checking, catalogue usage, product evaluation, store evaluation and unplanned purchasing. Items where measured on a five point Likert scale. All scales received Cronbach's alpha scores higher than 0.9 in Mortimer's (2012) analysis for reliability, which is well above the accepted value (Pallant, 2011).

All items where translated into the survey language, Swedish, and included in the pilot study. However, difficulties with some items was suspected since translation can lose the meaning of the item. I.e. one item was based on the Nike slogan "just do it", which in translation can be interpreted as taken out of context. However, all 66 items were left in the construct for the pilot study and external evaluation to assess their validity and reliability.

An additional factor related to cultural influence was also found in the literature, this contributed to a development of 6 items on cross-cultural food habits and preferences.

### *2.3.2 Pilot study*

A pilot study was performed in order to validate the survey questions and delete errors. Moreover, this is emphasized to test relevant scales (Shim et al. 1999; Putrevu and Lord, 2001; Jayasankaraprasad and Kathyayani, 2014). Primary in relation to the translated questions, in order to access their interpretation in another language, and the newly constructed scale on culture in order to control for reliability of the item construct.

The pilot consisted of a sample size of 12 respondents who completed the survey. It was initially distributed to a sample of 25 through e-mail. However, 1 was incomplete and 12 choose not to participate, resulting in a 48% response rate for the pilot study. The addition of comments after each question was arranged and participants were asked to evaluate the questions after completion and express if any item was difficult to understand or did not make sense in the context.

Results were analyzed in SPSS, with reliability tests of the scales. First, negatively worded items where recoded in order to access scale constructs. Afterwards, scales were tested individually to control for internal consistency (Pallant, 2011). Results from the individual tests are presented in table 1. The reliability assessments are based on Pallant's (2011) recommendations.

*Table 1. Reliability scores of scales on pilot study*

| **Variable** | **Items** | **Cronbach's Alpha score** | **Reliability assessment** |
|---|---|---|---|
| Shopping enjoyment | 5 | 0,81 | Accepted |
| Comparison hopping | 5 | 0,88 | Accepted |
| Price checking | 3 | 0,93 | Accepted |
| Catalogue usage | 4 | 0,79 | Accepted |
| Product evaluation | 8 | 0,56 | Rejected |
| Store evaluation | 5 | 0,89 | Accepted |
| Unplanned purchasing | 9 | 0,82 | Accepted |
| Food culture | 5 | 0,23 | Rejected |

The pilot resulted in a number of modifications of the survey in order to achieve internal consistency and avoid poorly framed questions.

First, the product evaluation variable received a low score. However, Pallat (2011) suggests checking scale items separately if a low score is acquired. Thus, inter-item correlation analysis was conducted on the scale to evaluate if a higher score could be achieved if any of the items were deleted. The test detected two negatives amongst the items, which suggests that these items are contributing to the lack of reliability of the scale Cronbach's alpha score if items deleted was evaluated to be higher (Appendix II, Pilot study, Product evaluation, Item-total statistics). The two items in questions were focused on price aspects of the products which contradicts the general evaluation items which focus on the actual product. Which could be the reason accountable for inconsistency with these items. Hence, both items were removed and the scale was once again tested for reliability with exclusion from item 1 and 8. The final Cronbach alpha score received was 0,8, with no negative inter-item correlations, suggesting the optimal solution for the scale.

Another scale which on the contrary did not receive a low Cronbach's alpha, but was modified mostly due to a large set of comments from respondents was unplanned purchasing. 2 items were expressed to cause confusion and respondents expressed that statements were "weird" in the context. This was related to "I just "Do It"" and "I see it, I buy it". Inter-item correlations on the scale were accessed and the statements did not generate negative inter-item correlation, however, if deleted a higher score on the Cronbach's alpha could be achieved. With respondents' evaluations and the suggestions for a higher Cronbach's alpha by analysis, both items were deleted. The final Cronbach's alpha score received was 0,86.

Finally, the self-constructed scale on food culture which had not been previously tested received a very low score for the initial Cronbach's alpha. However, after checking statistics for where the reliability failed (Appendix II, Pilot study, Food Culture, Item-total statistics), it was almost singularly one items which contributed to the very low score. The item "I only buy Swedish products" received a high negative value and with removal a score of 0,72 was achieved. Although this is an accepted score, a larger number of items can according to Pallant (2011) result in a higher reliability. With this, the question was reframed from a negative to a positive (I buy imported products) to see if this better would correlate with the other items in the main study.

*Table 2. Pilot study - New reliability assessment of scales after items deleted*

| **Variable** | **Items** | **Cronbach's Alpha score** *(Cronbach's Alpha score before deleting items)* | **Reliability assessment** |
|---|---|---|---|
| Product evaluation | 6 | 0,8 (0,56) | Accepted |
| Unplanned purchasing | 7 | 0,86 (0,82 | Accepted |
| Food culture | 4 | 0,72 (0,23) | Accepted |

### *2.3.3 Sample*

Since the purpose of this study is to segment consumers and draw conclusion upon the whole population, a probability sampling technique was adopted. Saunders et al. (2011) suggest a 4-step approach to conducting this technique.

1. Sampling frame
2. Sample size
3. Sampling technique
4. Checking for representability

The sampling frame for this study is to generalize for the whole population, with this an appropriate sample frame would be a means where the whole population could be drawn and where respondents which the questionnaire is distributed to is representable for this cause. Since 93% of the Swedish population had access to internet at home in 2016 and 71% out of the population are on Facebook (Iis, Svenskarna och Internet 2016), this is a good sampling frame for representability.

Deciding upon the appropriate sample size is important for the research objective in order to generate significant statistical results (Saunders et al. 2011). While Saunders et al. (2011) suggests a guideline based on population, Dolnicar (2011) wrote a paper on this issue in relation to cluster analysis, "A Review of Unquestioned Standards in Using Cluster Analysis for Data-Driven Market Segmentation". Her findings in the literature suggested a lack of standards for minimum sample sizes for clustering analysis, however, a general rule of thumb is a minimum of $2^k$ cases (k=number of factors in measurement).

A cluster sampling was used for the survey distribution. The clusters consisted of various Facebook groups related to geographical areas. It was distributed through a total of 8 different geographical areas in Sweden. These groups were functioning as geographical "pin boards" and were found trough a search for the term "anslagstavla" (pin board) in the Facebook group search function. The first 10 groups were applied for membership, however, only 8 accepted which is why this was the final cluster samples.

Since the groups are related to the geographical areas and not particular groups related to i.e. health and fitness, they are consisting of a larger variety of people and is therefore suggested as representable for the total population.

### *2.3.4 Reliability and validity*

Pallant (2010) suggests that reliability and validity can be achieved by selecting appropriate and measurable scales suitable for the research purpose. Decisions upon measurements will hence influence the data quality. Moreover, Pallant (2010) emphasize the importance of conducting pilot-studies in order to validate scales before the main study is conducted. This is primary because even previously validated measures for a specific cause might not be directly adoptable if the context is different or sampling technique varies from the original research.

According to Pallant (2010) reliability can be described as how free a scale is from random error. To test this, there are test available in SPSS (which will be the statistics program used for analysis). The test is used to assess the internal consistency of the items of a scale. The Cronbach's alpha coefficient was used in order to validate the scales included in this project. This was done first trough a pilot-study and later in the general sample as well, to assure reliability. Scores are presented separately under "2.3.2 Pilot study" and "4.2 Scales". All scales eventually received scores over 0,7 which is the minimum recommendation (Pallat, 2010). Thus, reliability of this research has been carefully controlled for.

Validity is another issue which related to if a scale if measuring what it is identified to measure. For approaching this discussion there are not as distinct measures as for controlling for the reliability of scale constructs. Pallant (2010) suggests three central issues concerning validity: content validity, criterion validity and construct validity. Since seven out of the eight scales had been tested two time previously and in-depth interviews had been administrated in order to validate the content, the criterion validity for the scales was controlled for. However, in order

to strengthen the content and construct validity of this research the pilot study was allowing the participants to comment on the different questions. They were provided with instructions regarding if they thought the questions were appropriable for measuring the general factor. Moreover, they were asked to elaborate on if they had encountered any issues with any questions.

### *2.3.5 Generalizability*

In order to draw conclusions upon the whole Swedish population and its grocery consumers there are several aspects which should be taken into account. According to Saunders et al. (2011) generalization is dependent on research design and research setting. Initially, the sample selection relies on specific methods in order to generalize the results. Since a probability sampling technique was adopted in this study and the sampling technique is considered representable (cluster sampling) for the population, the findings of this study should have a large enough methodological base for generalization amongst the Swedish population. Moreover, data was processed and tested on multiple aspects in a statistics program (SPSS) to assure no false assumptions were drawn and that significance level was reached before variances in the results were drawn as conclusions. However, since the study focuses on Swedish consumers and acknowledges that grocery shopping habits are not generalizable across countries, results are not predicting any general consumer traits but are specific for the Swedish market.

## 2.4 Literature search

For the literature search, a systematic approach was adopted with an addition of relevant research added sporadically during the reviewing of material. Additional research was mainly found in the references of the obtained material from the systematic search, thereafter searched for on an individual basis in order to cover a larger scale of the existing literature on the subject. Siddaway (2014) emphasize this additional screening for articles since various databases can fail to obtain all relevant literature for the review. This is because “Systematic reviews aim to be as comprehensive and representative of the literature they describe as possible.” (Siddaway, 2014, p.5).

The systematic search was conducted on the terms described by Siddaway (2014), including a 3-step search process: identification, screening and eligibility.

The first stage consists of an identification stage, also referred to as the database search. Siddaway (2014) suggests that a minimum of two databases should be searched in order to identify relevant material. The chosen databases for this project was Scopus and LUBsearch.

**Scopus** – Offers a large set of peer-reviewed literature with user friendly search tools. Moreover, tracking, analyzing and visualizing tools are allowing for a holistic overview of searches. Elsevis (About Scopus, 2017) state that "…you can make sure that critical research from around the world is not missed when you choose Scopus."

**LUBsearch (Lund Univerisity Libraries)** – A common platform for all libraries of Lund University. It is one of the largest electronical libraries in Sweden with a total of approximately 300 000 e-books, 200 databases and 17 000 e-publications.

After the databases were chosen, they were searched with predetermined keywords. The search criteria were that the keywords should be included in the title of the literature and limited to academic journals. Moreover, a truncation symbol was used in order to allow for various combinations of letters for the keywords. The final set of keywords consisted of (1) grocery segment* (combination i.e. grocery segmentation, grocery segments) (2) grocery typolog* (combination i.e. grocery typology, grocery typologies) (3) food retail* segment* (combination i.e. food retail segments, food retail segmentation, food retailing segmentation, food retailing segments) (4) food retail* typolog* (combination i.e. food retail typology, food retail typologies, food retailing typology, food retailing typologies).

The identification stage generated a set of 12 articles from Scopus and 17 articles from LUBsearch (total n=29).

The second stage in a systematic literature search includes a screening stage. This aims at eliminating doubles and ineligible articles from the search results (Siddaway, 2014). After deleting doubles, the article count decreased from 29 to 18, hence 11 duplicates were generated from the two databases. Additionally, material not meeting an inclusion/exclusion criteria for the review should be removed from the literature at this stage. For this project, the inclusion/exclusion criteria consisted of:

**Scope:** Grocery sector.

**Conceptualization:** Aims to define homogenous groups of consumers.

**Measures/key variables:** Segmentation should be defined based on an inclusion of either demographic or psychographic variables, preferably both.

**Research design and method:** Including a quantitative method. No additional limitations on this criteria due to an already very limited set of previous research.

After reviewing the titles and abstracts of the search results, additionally 3 articles were deleted due to not meeting the predetermined criteria.

The last stage of the literature search consists of reviewing the full-text articles for eligibility. Siddaway (2014) suggests that exclusion at this stage should be reasoned for in order to generate a higher transparency. Hence, table 2 concludes the rejected articles with reason.

*Table 2. Exclusion criteria at eligibility stage*

| Author (year) | Title | Reason for exclusion |
|---|---|---|
| Chung, Briggeman, and Han (2012) | *Willingness-to-Pay for Beef Quality Attributes: A Latent Segmentation Analysis of Korean Grocery Shoppers* | Focus on the product characteristic and not the consumer. Segmentation in this article is latent, and not representable for the grocery sector since only one single product is considered. |
| Li and Samuel (1997) | *The Importance for Retail Market Segmentation of Price, Sales, and Cultural Variability: Evidence from Chinese Cities for Processed Food Purchases* | Exploring demand and price levels for specific products and not aiming to define homogenous groups of consumers. |
| Memery, Megicks and Williams (2005) | *Ethical and social responsibility issues in grocery shopping: a preliminary typology* | Exploring product choice in relation to store choice thus not providing a more general segmentation of consumers. Conducted with a qualitative approach which consisted of 7 focus groups, a rather small sample for achieving a reliable representable clustering result. |
| *Wilson-Jeanselme and Reynolds* | *The advantages of preference-based segmentation: An* | Research does not consist of any segmentation of consumers. Proposes different frameworks |

| | | |
|---|---|---|
| | *investigation of online grocery retailing* | for conducting segmentation and discusses the benefits of each approach. Thus, not meeting the criteria for inclusion for this review. |

At the full-text eligibility reviewing, additional 4 articles were identified in the references of the eligible material. These were also included in the final literature list.

After concluding the final set of articles for the literature review, Siddaway (2014) explains two different approaches to review synthesis: quantitative synthesis (meta-analysis) or qualitative synthesis. A meta-analysis aims at finding significant relationships in the material and is therefore dependent on a standardized methodological approach in review material. A qualitative synthesis reviews existing literature from a more conceptual aspect and is appropriate when the material is methodologically diverse. It is a method which is beneficial for reviewing previous measurements in a research area which can generate a foundation for extending and developing the current literature. Thus, a qualitative literature review will be conducted in this project since the material is methodologically diverse and aims at generating a theoretical basis for a gap in the literature.

The full systematic literature search is concluded by a PRISMA flow chart in Figure 4. Where the final count of included articles is 14.

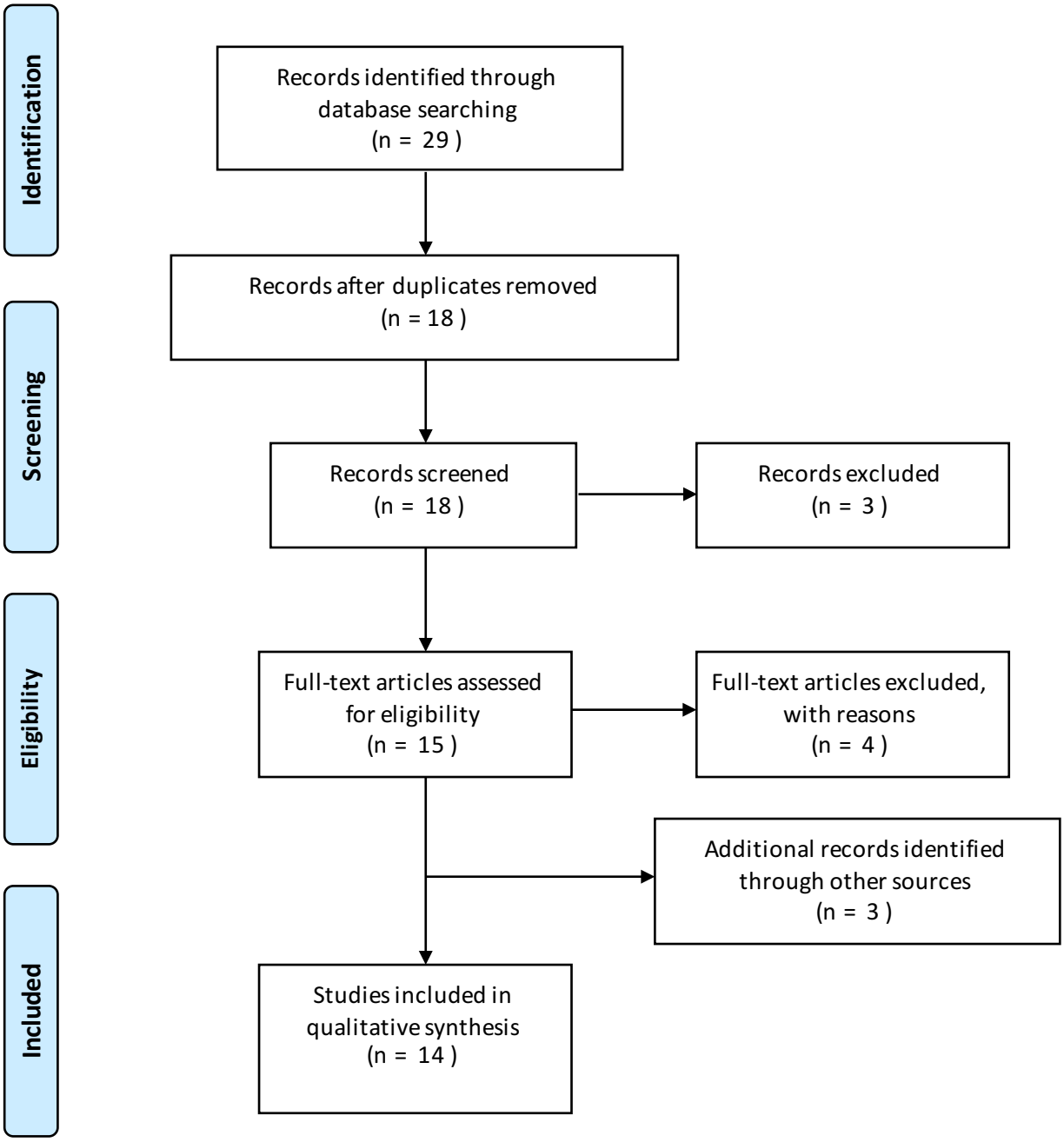


*Figure 5. PRISMA flow chart*

# 3. Theoretical foundation and literature review

The research will be founded in several theoretical findings within the area. These will be elaborated on in this chapter. Initially, segmentation theory will be described. Further, the retrieved literature will be reviewed and the frame for the study developed.

## 3.1 Segmentation theory

*"Companies cannot connect with all customers in large, broad, or diverse markets. But they can divide such markets into groups of consumers or segments with distinct needs and wants. A company then needs to identify which market segments it can serve effectively. This decision requires a keen understanding of consumer behavior and careful strategic thinking. To develop the best marketing plans, managers need to understand what makes each segment unique and different. Identifying and satisfying the right market segments is often the key to marketing success." Kotler and Keller, 2014, p. 313*

Segmentation of a market is rationalized by Sondhi and Chawla (2017) as "…dividing consumer markets into smaller, more homogenous clusters and then targeting relevant clusters.". Initially, segmentation was primarily focused on demographic variables (Sondhi and Chawla, 2017). However, more recent research acknowledges additional factors in segmentation. Sondhi and Chawla (2017) elaborate these to life-style, product benefit-based and usage-based segmentation. According to Kotler and Keller (2014) the most common segmentation variables are geographic, demographic, psychographic and behavioral. These will be further explained separately.

Geographic segmentation is done by subdividing the sample into smaller geographic areas. These can be i.e. regions, cities, neighborhoods. Additional common divisions are urban, suburban and rural. Marketing with a regional focus can go as far as dividing the geographical segments by zip code. However, based on the aim of segmentation, geographic segmentation might also be a sub-variable for the demographic factors. It all depends on how important the factor is considered in the specific industry. (Kotler and Keller, 2014)

Demographic segmentation on the other hand considers a set of variables. These are related to the descriptive characteristics of the consumers. Typically, these variables are simple to measure. Demographic segmentation can include i.e. age, gender, occupation, education, nationality, income, family size, etc.

Psychographic segmentation focuses on the motivation, values and personality traits of consumers. According to Kotler and Keller (2014) consumers that have similar demographic characteristics can differ highly in their psychographic profiles.

Behavioral segmentation bases the division with more emphasis on the product in question. Variables relates to knowledge, attitude, use and response towards a product. The specific consumer needs are taken into account in this segmentation – "Not everyone who buys a product has the same needs or wants the same benefits from it." (Kotler and Keller, 2014, p. 227). Additional aspects of behavioral segmentation should consider the decision roles. On various purchase occasions the end consumer is not always the way driving the purchase. Kotler and Keller (2014) concludes the decision roles down to five categories: initiator, influencer, decider, buyer and user. Moreover, there are several behavioral variables related to the usage of products. These could be i.e. (Kotler and Keller, 2014):

**Occasions** – At which time the consumer develops a need, purchase or use a specific product.

**User status** – Divides the consumers into groups based on the state of usage. I.e. non-, ex-, potential, first time or regular user.

**Usage rate** – How greatly a consumer uses a specific product.

**Buyer readiness state** – Divides the consumers based on how ready they are to purchase a product. I.e. they can be unaware of a product or have an intention to buy it.

**Loyalty status** – To which degree a consumer is loyal to a specific brand.

**Attitude** – Current attitude towards a product. I.e. positive, indifferent, etc.

**Multiple bases** – A combination of behavioral variables that are broken down on a hierarchal basis.

## 3.2 Segmentation of grocery consumers

The literature on grocery typologies are to this date very limited. A systematic literature search generated a portfolio of only 12 published articles in on the database Scopus and 17 on LUBsearch (Lund University Libraries). After following Siddaway (2014) steps to concluding eligible literature (process explained in chapter 2.4), the final count of articles to review out of the generated search results was 14. Figure 6 illustrates the spread of the published work over

time. The first research attempting to create a typology for grocery consumers was in 1978 and after the initial research there is a long gap of no further attention to this cause. However, in the last two decades, there has been a small share of additional of research in the area. Conducted research to the understanding of grocery consumer segments over the years have only exceeded a yearly contribution of over one study in two singular years. Overall, the research gap is large and studies conducted sporadically, projecting no major change of attention to the area.

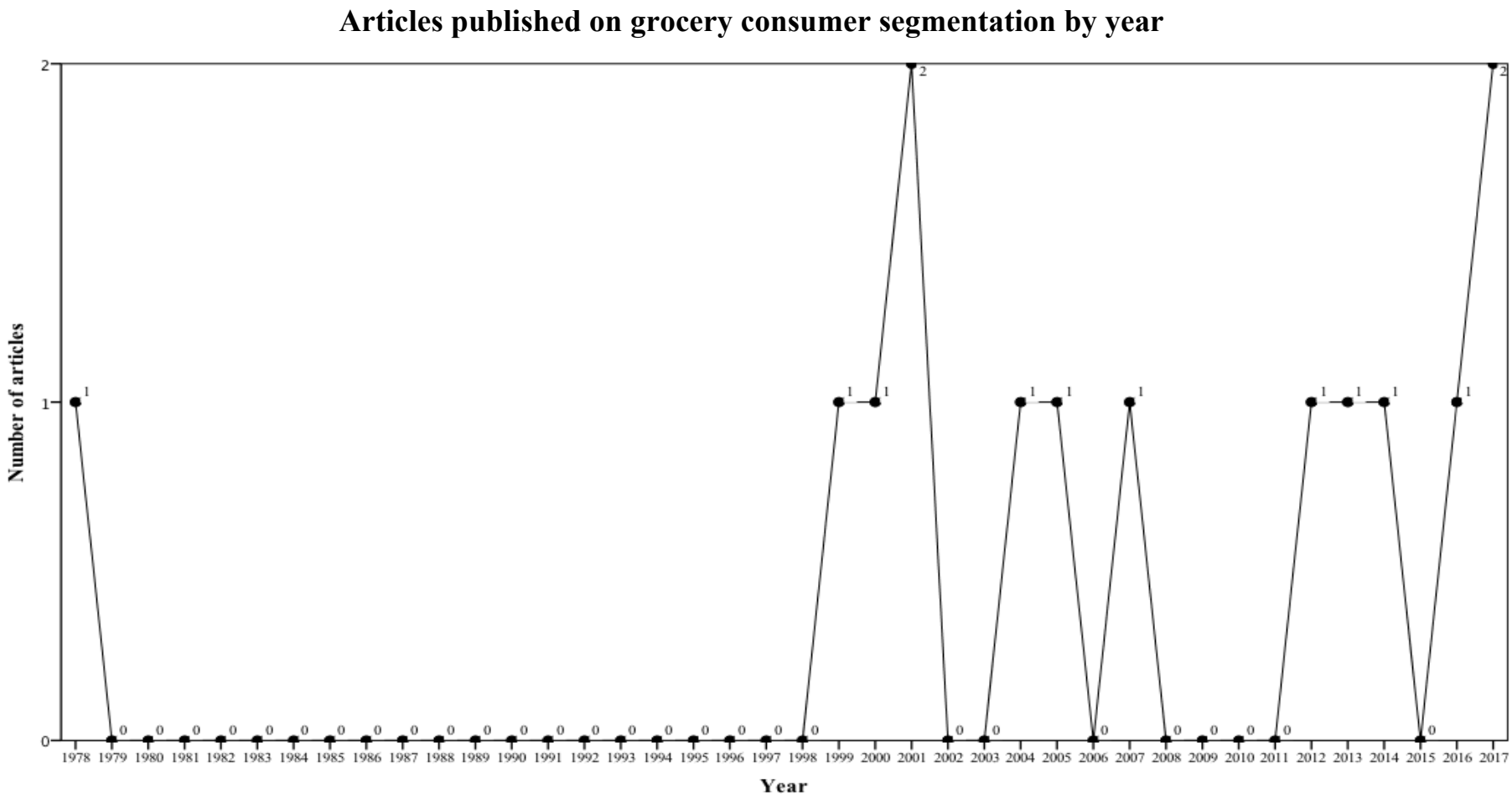


*Figure 6. Articles published on grocery consumer segmentation by year*

In difference from general retail segmentation theories explained, there have been attempts from several researchers to develop more industry specific segmentation frameworks with a higher emphasis on the individual characteristics of these sectors. Thus, only literature aiming to segment grocery consumers will be reviewed in this section. The reviewed literature consist of material retrieved from the systematic search previously explained and the individual finding will be elaborated further to found a basis for the study. The main focus will be on the methodology of the previous research and measurements involved to generate cluster solutions. Moreover, theoretical clarifications from the literature will be used to explain concepts and develop a theoretical frame for the segmentation study.

Williams and Painter (1978) attempted to propose a policy oriented segmentation of consumers in the grocery market in order to strategically plan marketing in accordance to the findings. Factors included to develop the clusters consisted of variables related to price, value for money, information, advertising, product quality, distance to store, accessibility to store and convenience. Additional factors measured to compare the segments consisted of questions related to social-economic factors, shopping habits, store loyalty and demographics. The method for collecting data was a survey method with a response number of 298 completed questionnaires. Finding of their research suggested four homogenous groups: apathetic shoppers, convenience shoppers, price shoppers and involved shoppers.

Proposed marketing value derived from the study was related to how to target these consumers and Williams and Painter (1978) suggest that there can be segments which are not compatible with each other, thus requiring decisions on which segments to target and a strong market positioning. However, they recommend focusing on solely one of the segments as a preferred strategy and state that *"...marketing programs stressing low prices may be in direct conflict with programs stressing convenience and high quality"* (Williams and Painter, 1978, p. 39). Additional finding suggest that geographic location is a strong determinant for where consumers choose to conduct their grocery shopping. Finally, they suggest that marketing strategists or managers of grocery stores should consider the segments when deciding on pricing, product selection, promotion, atmosphere and location.

Shim et al. (1999) conducted a study with the objective of distinguishing shopping orientation segments. Factors analysis was used to test psychographic statements and the analysis resulted

in a seven-factor variable solution in regards to: price consciousness, recreational shopping, food safety shopping, health shopping, convenience shopping, home shopping and home cooking. Items related to these scales were the foundation for establishing the segments. A four-cluster solution was proposed after examining the most valuable distribution. These consisted of food safety/health focused segment, convenience segment, middle of the road segment and home shopping segment.

While some of the segment labels are slightly ambiguous, the construct of measurements where relatively consistent with other studies. Middle of the road segment, which is also the largest segment of the study (57%), are exhibiting high emphasis on several of the included factors, hence the name. Consumers in this segment are price conscious, recreational, concerned with food safety, health and nutrition and seek convenience solutions. The only low scoring factors for this broad segment is the aspiration for home shopping.

Additional efforts were conducted at categorizing the segments based on demographic characteristics, information sources, shopping involvement and store attribute importance. However, Shim et al. (1999) concludes that the demographic factors failed to predict behavior and did not suggest any significant different in regards to the various clusters. Additional categorizing factors were slightly more successful at describing the segments, thus the authors suggest that this should be emphasized when targeting consumers.

Putrevu and Lord (2001) segmented a sample of 588 US grocery shoppers with an emphasis on the search process. The variable included both aspects of the search (i.e. discounts) and the extent of the search (low-high). Clustering variables were related to prices, brands, promotions, coupons, advertising, cross-shopping, word of mouth and reviews. This generated a solution of tree segments: high-search segment, selective-search segment and low-search segment. According to Putrevu and Lord (2001) previous studies have suggested that grocery shopping is a low-search shopping category. However, findings of their research suggested the opposite, with a sample share as high as 89% engaging in search activities before purchasing groceries. Consumers suggested to conduct a higher primary search consisted of younger and older respondents (age: under 25, over 55). The moderate search segment was dominated by the age groups in between, age 25-54. Finally, the low-search segment consisted of mainly time pressured consumers with high education and income, which did not rank the perceived importance of grocery shopping high.

Kenhove and Wulf (2000) approached the creation of typologies in a situational perspective, with the intent to develop typically relative general segmentation variables. The method of the study consisted of a multi-item scale on time pressure and income demographics. Additional non-dependent variables where behavior and attitudes related to grocery shopping, 503 respondents participated in the survey which resulted in a four-cluster solution: money-poor/time-rich, money-poor/time-poor, money-rich/time-rich, money-rich/time-poor. As the personal situational and income related variables defined the cluster division, demographics, shopping frequency, grocery spending's, product preferences and store preference served as categorical elements in the analysis. Moreover, they included a task focused categorization and general attitude towards the shopping activity. As they found that some aspects of grocery shopping were similar in all segments (i.e. preference for shopping at a large supermarket chain and purchase volumes), most aspects differed, leading to the conclusion that grocery consumers are distinctively different.

Brown (2001) researched grocery typologies in a small chain perspective. He founded his measurements in previous findings from focus groups and derived a set of 23 items from this. A total of 300 respondents participated in the survey, which mainly emphasized store attributes to cluster the sample. The study resulted in five small chain segments: customer service seeker,' specials' seeker,' take-home foods and modern store seeker, low price seeker and small store seeker. Brown (2001) express that the findings support the hypotheses that small chain grocery segments are distinct. Moreover, he suggests additional characteristics special for the small chain grocers. First, they put less emphasis on lower prices. Second, they seek a higher degree of customer service.

Rohm and Swaminathan (2004) on the other hand focused on a slightly more modern concept of grocery shopping, the online platform. Typologies were clustered based on 31 items related to 6 different variables on shopping motivation: shopping convenience, information seeking, immediate possession, social interactional and variety seeking. Although the study aimed at segmenting online consumers their sample consisted of both online and offline consumers and a total of 429 respondents. The method adopted was a mailed survey for the online shoppers and personal collection in a bricks and mortar store for the offline sample. Their clustering contributed to a four-segment solution: the convenience shopper, the variety seeker, the balanced buyer and the store-oriented shopper. They propose that their findings support that online grocery shopping consumers consist of distinct segments.

Morchett et al. (2005) explored the creation of segments based on motivational forces related to grocery shopping. The study, which consisted of a sample of 560 respondents was conducted in Germany. According to priori reviewing, the authors suggest that previous research focuses on two motivational aspects: utilitarian and hedonic. Utilitarian motives are functional and typically related to product factors. Hedonic motives are non-functional and related to shopping stimulation factors. In the context of grocery shopping, Morchett et al (2005) developed a set of utilitarian and hedonic motivations that they had found as potentially significant for segmenting grocery consumers. These were: orientation towards quality of product assortment, orientation towards variety of assortment, one-stop-shopping orientation, price orientation, orientation towards quick shopping, service orientation and orientation towards store atmosphere. These categories were further categorized to scope orientation, quality orientation, price orientation and time orientation.

The motivational forces generated a four-cluster solution: one-stop shoppers, time-pressed price shoppers, dedicated quality shoppers, and demanding shoppers. They further analyzed the common characteristics related to various store factors. These categories where quality of performance, scope of offers and price level. Different stores were also evaluated based on the segments perceptions and attitude towards them, generating a more practical contribution to German grocery retailers.

Prasad and Reddy (2007) suggested a change of consumer preferences and changing trends in grocery purchases in India, thus conducted a study to explore the influence of demographic and psychographic factors in grocery shopping. 200 Indian consumers participated in the study that was measured on a 35-item psychographic measurement with the factors: innovator, values, utilitarian, family orientation, entertainment seeker price/quality sensitive, leader, intellectual. Additional questions regarding demographics and activities were also used in order categorize the developed segments. The analysis presented four segments: hedonic consumers, utilitarian consumers, conventional consumers, socialization type consumers.

They suggest that the hedonic consumers are primarily concerned with enjoyment rather than the task and typically have a high degree of unplanned purchases. Utilitarian consumers are focused on the functional task and interested in quality and a selection of brands. Conventional consumers do not enjoy shopping and place high emphasis on location, typically unengaged in the shopping experience. Finally, socialization type consumers are generally needs based

consumers, however, they enjoy shopping for groceries and sees it as a means of socializing. Further Prasad and Reddy (2007, p. 29) suggest that *"It is an up hill task to serve today's pragmatic and enigmatic consumer because consumer is looking for huge variety of quality products, offering self-service, pleasant ambience, and store services like assistance, baggage, promotions, credit facilities etc."*.

Jayasankaraprasad and Kathyayani (2014) research proposed developing segments with a cross-format shopping aspect, hence consumers shopping groceries at two or more retail formats. The primary segmentation variable was shopping motivation. They suggest that grocery shopping motives exceed simple task focused purchases. The framework proposed consist of utilitarian and hedonic motives. Moreover, social and local shopping motives are considered and retail format patronage included as a categorical factor.

Initially, Jayasankaraprasad and Kathyayani (2014) conducted an exploratory study to develop the measurements for the study. 20 store managers participated in this preliminary study. 65 items on cross-shopping motives and store choice was derived from the analysis. The main study consisted of a questionnaire method with 1040 grocery consumers participating. They found a five-cluster solution to be optimal and the final segments were: the economic shopper, the convenience shopper, price-promotional shopper, hedonic shopper and social shopper. Further, the study suggests that the typologies differ in their store format patronage and.

Atkins et al. (2016) conducted research on smart shopper segments due to suggested shifts in consumer trends. They describe a smart shopper as consumers who are focused on saving in time money and effort. Thus, a smart shopper is very involved in the shopping experience and always seek additional benefits. The study included a wide aspect concerned with pre-purchase, purchase and post-purchase aspects. Segments were constructed based on 6 factors: information search, planning, saving effort, right product, saving money and saving time. 24 items made up the total measurement included in the survey, which 751 American consumers participated in. According to the study, three segments where distinguished: spontaneous, apathetic and involved. Additional factors where used to compare the segments, including: gender, generation and education. A set of post-purchase evaluations on satisfaction, word of mouth, utilitarian shopping value and hedonic shopping value were also used to further develop the typologies.

The spontaneous segment experienced high values for saving effort and time in their grocery shopping while not planning for purchases or searching for information. Apathetic consumer

where negative to all aspects of grocery shopping in exception for the information search. The involved segment experience positive values on all aspects, particularly saving effort, getting the right product, saving money and saving time, relating the highest to values associated with a smart shopper according to the authors.

Peker et al. (2017) proposed a new model for segmenting grocery consumers, referred to as the LRFMP model. The model is derived from a previous developed models: RFM, which aims at predicting consumer behavior and LRFM, a model for segmenting consumers. In the context of grocery shopping however, the authors suggest a need for modifications in the previous models, adding the P for periodicity. The full model measures the variables:

L - Length
R - Modified recency
F- Frequency
M - Monetary
P- Periodicity

This study methodologically differed from all other reviewed articles for this review since no consumer assessment was included. Instead the data was retrieved from purchase transactions of a loyalty card system. This generated a sample size as large as 10 471 customers. The data consisted of information on customer's membership number, purchase date, purchase item, item quantity purchased, item category, a set of item sub-categories and item price. Segments derived from the large dataset where: high-contribution loyal customers, low-contribution loyal customers, uncertain customers, high-spending lost customers and low-spending lost customers. The authors further suggested managers should pay extra attention to segment 1, which is the most valuable segments out of the group.

Harris et al. (2017) created typologies with the aspect of the online and offline channel. The purpose of the study is similar to Rohm and Swaminathan (2004) study which aimed to segment online consumers, the measurements of the two studies differ significantly. While Rohm and Swaminathan (2004) determined segments based on shopping motivation, Harris et al. (2017) segmented based on experienced advantages and disadvantages related to shopping channel.

Harris et al. (2017) measured the perceived advantages and disadvantages of the online and offline channel of 23 items, which of 15 considering the online channel and 8 the traditional

supermarket. 871 British consumers participated in the study which derived a four-cluster solution: supermarket loathers, impulse shoppers, apathetic shoppers, one stop shoppers.

Mortimer (2012, 2013) conducted two studies on grocery store typologies. His initial researched focused on male typologies, while the second research attempted to compare male and female grocery shoppers. The first study, of male consumer typologies, proposed to segment based on product and store attributes. He conducted an extensive literature review to derive appropriate measures for the study and further validated the measured with in-depth interviews. The variables he suggested to determine grocery consumer segments were shopping responsibility, shopping enjoyment, store characteristics, comparison shopping behavior, price checking and catalogues, unplanned and impulse shopping and product evaluation criteria. From this study he developed four different male clusters from the sample of 280 Australian consumers. The segments were: convenience/busy, equitable, apathetic and economic/budget.

In his following study, Mortimer (2013), attempted to develop his previous work by implementing the segmentation tool on both men and females. The purpose of the study was consistent with the previous, to segment based on product and store attributes and the same factors which were used in the initial survey construct. In this study, the sample size was almost twice as large as the first one (n=560). He found the same four-solution segments for male consumers: convenience/busy, equitable, apathetic and economic/budget. However, the optimal cluster-solution for the female sample was three. These segments were: equitable, apathetic and economic/budget.

Table 3 concludes typologies found in the reviewed material in the grocery market with addition to method used and sample size.

*Table 3. Grocery shopper typologies found in the literature*

| **Author (year)** | **Typologies** | **Method** | **Sample size** |
|---|---|---|---|
| Williams et al. (1978) | (1) Apathetic Shoppers<br>(2) Convenience Shoppers<br>(3) Price Shoppers<br>(4) Involved Shoppers | Survey | 298 |
| Shim et al. (1999) | (1) Food Safety/Health Focused | Survey | 439 |

| | | | |
|---|---|---|---|
| | Segment<br>(2) Convenience Segment<br>(3) Middle-of-the-Road Segment<br>(4) Home Shopping Segment | | |
| Kenhove and Wulf (2000) | (1) Money-poor, time-rich<br>(2) Money-poor, time-poor<br>(3) Money-rich, time-rich<br>(4) Money-rich, time-poor | Survey | 503 |
| Putrevu and Lord (2001) | (1) High-search segment<br>(2) Selective-search segment<br>(3) Low-search segment | Survey | 588 |
| Brown (2001) | (1) Low price seeker<br>(2) Specials' seeker<br>(3) Take-home foods and modern store seeker<br>(4) Customer service seeker | Survey | 300 |
| Rohm and Swaminathan (2004) | (1) The convenience shopper<br>(2) The variety seeker<br>(3) The balanced buyer<br>(4) The store-oriented shopper | Survey | 429 |
| Morchett et al. (2005) | (1) One-stop shoppers<br>(2) Time-pressed price shoppers<br>(3) Dedicated quality shoppers<br>(4) Demanding shoppers | Personal interviews | 560 |
| Prasad and Reddy (2007) | (1) Hedonic consumers<br>(2) Utilitarian consumers<br>(3) Conventional consumers<br>(4) Socialization type consumers | Survey | 200 |
| Mortimer (2012) | (1) Convenience/Busy<br>(2) Equitable<br>(3) Apathetic<br>(4) Economic/Budget | Survey | 280 |
| Mortimer (2013) | (1) Female/male cluster: | Survey | 560 |

| | | | |
|---|---|---|---|
| | Convenience/Busy<br>(2) Female/male cluster: Equitable<br>(3) Female/male cluster: Apathetic<br>(4) Female/male cluster: Economic/Budget | | |
| Jayasankaraprasad and Kathyayani (2014) | (1) The economic shopper<br>(2) The convenience shopper<br>(3) Price-promotional shopper<br>(4) Hedonic shopper<br>(5) Social shopper | Survey | 1040 |
| Atkins et al. (2016) | (1) Spontaneous<br>(2) Apathetic<br>(3) Involved | Survey | 751 |
| Peker et al. (2017) | (1) High-contribution loyal customers<br>(2) Low-contribution loyal customers<br>(3) Uncertain customers<br>(4) High-spending lost customers<br>(5) Low-spending lost customers | Purchase records | 10 471 |
| Harris et al. (2017) | (1) Supermarket loathers<br>(2) Impulse shoppers<br>(3) Apathetic shoppers<br>(4) One stop shoppers | Survey | 1327 |

For grocery typologies, the findings of various typologies, i.e. the convenience shopper, price shopper and the social shopper are quite consistent in the literature. Although the shopper typologies differ slightly amongst the studies, there is consistency in various measurements and methods for segmentation. The majority of the reviewed articles include a set of independent demographic variables used to compare the clusters. These clusters are developed by various scale items generally related to shopping motivation and attitude. Suggesting that consumers should be segmented based on their hedonic and utilitarian motivations while compared based on demographics in order to distinguish the best ways to target these homogenous groups. A large scale of the research conducted on segmentation has had various aims i.e. online shoppers,

small chain perspective, cross-format shopping, etc.

One of the more general segmentation approaches was developed by Mortimer (2012, 2013). Even though the initial study focused primarily on segmenting male consumers, he re-tested his measurements in order to segment both men and female grocery shoppers. His study suggested that the scale-construct was appropriate for this cause as well. Moreover, his literature review on previous segmentation studies were large and up to date in comparison to many other papers in this review. He based his measurements in several previous segmentation approaches and his scales had been checked for reliability and validity in both studies. It is also one of the most acknowledged research conducted in the last five years for grocery consumer segmentation, receiving the highest cited number on Scopus. Thus, Mortimers (2012, 2013) scale-construct developed for segmenting grocery consumers will be adopted for this study in order to segment Swedish consumers. However, his construct included a variable which was relating to gender roles in grocery shopping (shopping responsibility), hence this variable will not be used. Additional factors were: shopping enjoyment, store characteristics, catalogue usage, comparison shopping, price checking, product evaluation and unplanned purchases.

### *3.2.1 Segmentation factors for grocery consumers*

#### *2.1.1.1 Shopping enjoyment*

While grocery shopping is something everyone has do, different consumers have expressed various levels of enjoyment in the conduction of the task. While some might view it as a fun activity, others dread the choir and view it as boring or a pain. This factor scale included a number of 6 items. (Mortimer, 2012)

#### *2.1.1.2 Store evaluation*

Store choice is primarily made by consumers based on evaluation criteria that appeals to them. Some consumers might emphasize easy parking while others base their decision of shopping destination on geographic characteristics. Primarily, Mortimer (2012) focused on the convenience evaluation criteria on this factor and less on the store characteristics'. Resulting in a scale of 5 items. (Mortimer, 2012)

#### *2.1.1.3 Comparison shopping*

Another aspect of grocery shopping is the cross-shopping and comparison between stores.

Mortimer (2012) suggest that previous research has found that some consumers are more open for comparison shopping while others see no additional value in this. The scale included 5 items related to how open consumers are to comparison shopping activities. (Mortimer, 2012)

*2.1.1.4 Price checking*

Checking prices is another factor which Mortimer (2012) suggests varies for grocery shoppers. Some consumers put higher emphasis on controlling prices and comparing while others simply just will not bother to do this. He constructed a rather small scale for this factor, including only 3 items. (Mortimer, 2012)

*2.1.1.5 Catalogue usage*

Comparison of prices and saving money on grocery shopping is according to Mortimer's (2012) review of previous research considered one of the most important aspects. He suggests that consumers are different in their involvement of grocery shopping and some conduct more comparative activities than other consumers. Specials and discounts are regarded as factors in which grocery shoppers conduct extra effort in to save money. This factor was measured on 3 items.

*2.1.1.6 Product evaluation*

Another criteria grocery shoppers determine their shopping habits by is their product evaluation. On this aspect, various consumers have different demands and put emphasis on a number of aspects of the product. This variable consisted of 10 general product evaluation items. (Mortimer, 2012)

*2.1.1.7 Unplanned purchasing*

Mortimer (2012) suggests that some consumers engage in more unplanned purchasing than others. Some consumers are good at planning their purchases while others have a tendency to buy unreflectively. Thus, he proposes 9 items to measure unplanned purchasing.

***3.2.2 Cultural routines and food consumption***

More recent research has explored an additional segmentation aspect for food consumption, which is founded in ethical and cultural traditions (Sondhi and Chawla, 2017). According to

Marshall (2005) food consumption is deeply founded in various cultural rituals and routines, hence is not an individualistic practice. He further explains that "…much of our engagement with food is unspectacular and inconspicuous, undertaken in private, and regulated by a series of unspoken rules regarding eating. The frequent, diurnal nature of this consumption practice implies routine and often unreflexive (un)conscious decisions" (Marshall, 2005, p. 69-70).

This variable has been failed to address in previous segmentation research and thus contributes to a new valuable aspect of research in the area. Marshall (2005, p. 82) suggests that "There has been little cross-cultural work on meals or consideration of the ways in which eating occasions impact upon other food consumption activities such as shopping for food and this offers a rich area for further research.". By failing to cluster consumers by this variable, a distinct market segment can be overlooked and hence valuable information in regards to food consumption unexploited.

Food is an essential good, which means that all members of a society are consumers of the good. However, it is not just a good that is consumed for the essential consumer needs, but restricted by various cultural rules by which products that are regarded as acceptable (Marshall, 2005). While insects might be regarded acceptable in several Asian countries, most westerners would not preferably consume this type of product. Thus, cultural influence is a variable that is particularly important to take into consideration when segmenting the grocery market in contrary to more hedonic consumption.

In addition to the more psychological bases for cultural influence in food consumption, there are also biological influences that can develop consumers preferences in food products. A biological aspect such as the sense of taste, is generally considered a very subjective and individualistic entity. However, the judgement of taste can be influenced by "learning" to like various products and thus tradition of food consumption plays a large role is consumer preferences. (Marshall, 2005)

#### *3.2.4.1 Cross culture in Sweden*

Sweden is exhibiting an increasing population growth and this is largely due to high immigration rates. In 2016, 80% of the total population growth was due to immigration (SCB, 2017). This increase is expected to continue and the population growth is forecasted to increase a further 10% by 2024 (Fria Tider, Albinsson, 14 January, 2017). Titles in the likings of

"Sweden is changing people" can be seen in the news feeds and the time frame for issuing asylum is regarded one of the fastest in Europe in 2017, placing second after Germany (Asylum Quarterly Report, Eurostat, 2017).

The share of inhabitants that comprises of immigrants was as high as 17,9% in 2016. However, culture and food habits in a household are shared with the children, thus if including domestic born with two foreign-born parents the share increase to 23,3%. If further including domestic-born with one foreign-born parent, the share was as high as 30,6% of the total population in Sweden 2016. (Statistikdatabasen, Befolkningsstatistik >> Utländsk/Svensk bakgrund, 2017). The statistics are concluded in Table 4 – "Population Divided by Foreign/Swedish Heritage 2016".

*Table 4. Population Divided by Foreign/Swedish Heritage 2016 (Own illustration, source – Statistikdatabasen, Befolkningsstatistik >> Utländsk/Svensk bakgrund, 2017)*

| | Number of people | Percentage out of total | Population with foreign heritage |
|---|---|---|---|
| Immigrants | 1 784 497 | 17,9% | 17,9% |
| Born in Sweden with two foreign-born parents | 535 805 | 5,4% | 5,4% |
| Born in Sweden with one foreign-born parent | 739 813 | 7,4% | 7,4% |
| Born in Sweden with two Swedish parents | 6 935 038 | 69,4% | - |
| Total | 9 995 153 | 100,0% | 30,6% |

The top immigration countries were in 2016: (1) Syria, (2) Afghanistan, (3) Iraq, (4) Turkey and (5) Iran (Migrationsverket, 2017). None of these countries are geographically or culturally close to Sweden. Thus, food culture and products consumed for these immigrants might differ from what is typically sold in the Swedish grocery stores.

With such a large share of inhabitants with a foreign heritage, the demand for different types of food products is a factor that should be significant in customer segmentation. Sondhi and Chawla (2017) and Marshall (2005), emphasize this approach in their research papers. Cross

cultural food habits, which are currently influencing over 30% of the Swedish population will hence be considered as a segmenting variable in this project. Building on a more traditional segmentation approach of the grocery market.

# 4. Analysis

A total of 270 respondents completed the study which was conducted with a survey method. This meets the minimum recommendation for clustering sample size according to a measure proposed by Dolnicar (2002). The recommendation of minimum sample size of $2^k$ (k=number of factors). Since the construct consisted of 8 factors the sample would have to be a minimum of $2^8 = 256$. Thus, the 270 cases should be enough for determining segments from the dataset.

The dataset was imported to SPSS for further analysis. Initially, this analysis will describe various demographic characteristic of the sample in order to generate an overview of the participants. Out of the 1767 respondents which the survey was distributed to, only a share of 15% (n=313) responded, of which 2% was uncompleted (n=43). This left a 13% valid response rate out of the distributed surveys and 270 individual cases.

The first demographic variable explored is gender. In the total sample, this factor is dominated by women, representing 77,4% out of the total cases, while men only make up a 22,6% share of the total participants.

*Table 5. Gender*

| | **Gender** | |
|---|---|---|
| | Frequency | Percent |
| Men | 61 | 22,6 |
| Women | 209 | 77,4 |
| Total | 270 | 100,0 |

In the age division, the share is very well spread and all age groups are well represented with a quite equal distribution throughout. The sample was reduced into five different age groups indicating that a share of 20% would be an exact equal variation. All groups are very close around that division, with the exception of the oldest group which is a few percent lower (15,6%) than the others.

*Table 6. Age*

| Age | | |
|---|---|---|
| | Frequency | Percent |
| <26 | 49 | 18,1 |
| 26-35 | 58 | 21,5 |
| 36-45 | 58 | 21,5 |
| 46-54 | 63 | 23,3 |
| >54 | 42 | 15,6 |
| Total | 270 | 100,0 |

In terms of relationship status, the majority of the sample are married (37,8%) closely followed by living with a partner (32,6%) and finally, the smallest group were single (29,6). However, these groups are also all very well represented and again the sample demonstrates a very good variation.

*Table 7. Relationship status*

| Relationship status | | |
|---|---|---|
| | Frequency | Percent |
| Married | 102 | 37,8 |
| Living with a partner | 88 | 32,6 |
| Single | 80 | 29,6 |
| Total | 270 | 100,0 |

The representation in the different educational levels are slightly more variated than the previous two demographic factors. On this aspect, the sample is highly representative in the high school/higher vocational education level, representing a share of 49,3% of the samples' highest educational level. University/college education (2-3years) is also well represented (28,1%), while a lower share has a long university education (>4years). Very few respondents had only completed the lowest level of education, elementary school (7%).

*Table 8. Highest education*

| Highest education | | |
|---|---|---|
| | Frequency | Percent |
| Elementary school | 19 | 7,0 |
| High school/higher vocational education | 133 | 49,3 |
| University/college education (2-3years) | 76 | 28,1 |
| Long university education (>4years) | 42 | 15,6 |

| | | |
|---|---|---|
| Total | 270 | 100,0 |

The primary education amongst the respondents was “employed and working full time”, this category represented 52,6% of the sample. Followed by “employed and working part time”. Thus, around 70% of the sample consisted of the working class. A very small share were unemployed (2,2%) or self-employed (4,4). The ratio of students and retired respondents were quite equal (students=9,6%, retired=8,1%). Finally, 5,2% indicated another occupation than the predetermined categories.

*Table 9. Primary occupation*

| **Primary occupation** | | |
|---|---|---|
| | Frequency | Percent |
| Employed and working full time | 142 | 52,6 |
| Employed and working part time | 48 | 17,8 |
| Unemployed | 6 | 2,2 |
| Student | 26 | 9,6 |
| Self-employed | 12 | 4,4 |
| Retired | 22 | 8,1 |
| Other | 14 | 5,2 |
| Total | 270 | 100,0 |

Monthly income of the sample was ranging from the smallest group making up 12,6% of the sample to the highest group making up 34,1% of the sample. Amongst the categories, the most common was 20 000-30 000 SEK. While the middle classifications were a bit more represented than the lowest and the highest income categories, there is still a good ratio in each category to be representative.

*Table 10. Monthly income*

| **Monthly income (Before taxes)** | | |
|---|---|---|
| | Frequency | Percent |
| 0-10 000 SEK | 36 | 13,3 |
| 10 000-20 000 SEK | 47 | 17,4 |
| 20 000-30 000 SEK | 92 | 34,1 |
| 30 000-40 000 SEK | 61 | 22,6 |
| >40 000 SEK | 34 | 12,6 |
| Total | 270 | 100,0 |

The household size was primary 2-3 person households (51,9%), or 4-5 people households

(27,8%). The third most common household size was 1 (14,8%). Few respondents lived in households with more than 5 people (5,6%).

*Table 11. Household size*

| Household size | | |
|---|---|---|
| | Frequency | Percent |
| 1 | 40 | 14,8 |
| 2-3 | 140 | 51,9 |
| 4-5 | 75 | 27,8 |
| >5 | 15 | 5,6 |
| Total | 270 | 100,0 |

### *4.1 Measures*

A factor analysis was initially conduced in order to evaluate items included in the construct. Factors analysis is primary conducted to reduce data and eliminate items which are not contributing to a factor and summarize items which can be concluded to the same "group" (Pallant, 2010). An exploratory factor analysis was first conducted in other to determine the optimal component solution. First a Kaiser-Meyer-Olkin (KMO) and Barlett's test was conducted in order to confirm that the dataset was appropriate for factor analysis (Pallant, 2010). It is recommended that the KMO score should exceed 0.6 and the Sig. value be smaller than 0,05. Thus, both tests confirm that the dataset is appropriate for factor analysis (see table. 12).

*Table 12. KMO and Barlett's test*

| Test | | Result |
|---|---|---|
| **Kaiser-Meyer-Olkin Measure of Sampling Adequacy.** | | 0,781 |
| **Bartlett's Test of Sphericity** | Approx. Chi-Square | 6050,962 |
| | df | 780 |
| | Sig. | ,000 |

The construct suggested in the study consisted of 8 different factors: shopping enjoyment, comparison shopping, price checking, catalogue usage, product evaluation, store evaluation,

unplanned purchasing and food culture. The exploratory factor analysis was evaluated by the scree test, which is a method where the included factors eigenvalue is plotted out in order to determine where there is a change in direction of the curve. This is also referred to as the elbow method. In the case of this study, the "elbow" was detected at the 8th factor, indicating that the initial number of factors are also what explain the variance in the dataset. Thus, continuous factor analysis will be conducted with the predetermined number of factors (n=8).

Eigenvalues are suggesting how much of the variance that can be explained by each factor. The values attained for the 8 factors are concluded in table 13 below. As can be seen, some values are explaining the variance amongst the respondents better than other. Unplanned shopping for example is evaluated to explain 16% of the total variance while price checking accounts for the small share of 3,4% of the variance. This indicates that price checking is a more common trait amongst the sample than unplanned shopping.

*Table 13. Eigenvalues of factors*

| Factor | Eigenvalue |
|---|---|
| **Unplanned shopping** | 6,232 |
| **Store evaluation** | 4,058 |
| **Catalogue usage** | 3,887 |
| **Food culture** | 3,319 |
| **Shopping enjoyment** | 2,719 |
| **Comparison shopping** | 2,231 |
| **Product evaluation** | 1,632 |
| **Price checking** | 1,310 |

The component matrix (Appendix II, Analysus, Rotated component matrix) suggested good factor correlation of the suggested constructs. The guideline here is that values over 0,4 suggest strong factor loading and are thus accepted (Pallant, 2010). However, one item (I3: Shopping is a task) related to shopping enjoyment did not perform well in the analysis and did not correlate with the additional items of the scale. Thus, this item was removed from further analysis. Moreover, one item related to product evaluation (I1: Brand is important) only received a factor loading of 0,332, and was hence removed from analysis as well. The factor loading of the individual items are summarized in the table below.

*Table 14. Factor analysis – item factor loadings*

| Factor | Item | Factor loading |
|---|---|---|
| **Shopping enjoyment** | Look forward to shopping | 0,881 |
| | Enjoy shopping | 0,875 |
| | Shopping is boring | -0,892 |
| | Shopping is a pain | 0,784 |
| **Comparison shopping** | Not willing to go extra effort | 0,721 |
| | Will shop at more than one | -0,592 |
| | Not worth the time | 0,767 |
| | Never shop at more than one | 0,588 |
| | Not worth the effort | 0,766 |
| **Price checking** | I read price tags | 0,791 |
| | I check prices before buying | 0,717 |
| | I check prices of purchases | 0,728 |
| **Catalogue usage** | I prepare a list of specials | 0,883 |
| | I prepare list from catalogue | 0,878 |
| | I purchase based on specials | 0,679 |
| | I read catalogues | 0,746 |
| **Product evaluation** | Nutritional info is important | 0,814 |
| | Ingredients are important | 0,774 |
| | Quality is important | 0,777 |
| | Appetizing food is important | 0,562 |
| | Value is important | 0,541 |
| **Store evaluation** | Easy parking | 0,689 |
| | Easy access | 0,852 |
| | Convenient locations | 0,857 |
| | Easy to find | 0,792 |
| | Easy to get to | 0,861 |
| **Unplanned purchasing** | I buy spontaneously | 0,769 |
| | I Buy without thinking | 0,820 |
| | I buy now and think later | 0,830 |
| | I buy at the spur of the moment | 0,862 |
| | I buy how I feel at the time | 0,794 |
| | I carefully plan my purchases | -0,604 |
| | I am a reckless shopper | 0,470 |
| **Food culture** | I like multi-cultural food | 0,719 |

| | | |
|---|---|---|
| | I buy imported products | 0,598 |
| | It can be difficult to find various imported products | 0,690 |
| | I would like a higher variety of imported products | 0,864 |
| | I shop in specialty stores in order to find some imported products | 0,716 |
| | The variety of imported products is important to me | 0,719 |

Further analysis was conducted in order to determine if there was any correlation amongst the set of factors. This was done with a component correlation matrix. The matrix suggested no significant correlation between any of the factors. According to Pallant (2010), the level for factor correlation is at 0,3, which none of the components are in this analysis.

*Table 15. Component correlation matrix*

**Component Correlation Matrix**

| Component | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | 1,000 | -,007 | ,098 | -,036 | ,147 | ,063 | -,218 | ,239 |
| 2 | -,007 | 1,000 | -,063 | ,019 | -,123 | -,224 | ,130 | -,043 |
| 3 | ,098 | -,063 | 1,000 | ,065 | ,091 | -,087 | -,042 | ,109 |
| 4 | -,036 | ,019 | ,065 | 1,000 | -,048 | ,086 | ,096 | -,064 |
| 5 | ,147 | -,123 | ,091 | -,048 | 1,000 | -,084 | -,096 | ,051 |
| 6 | ,063 | -,224 | -,087 | ,086 | -,084 | 1,000 | ,068 | -,065 |
| 7 | -,218 | ,130 | -,042 | ,096 | -,096 | ,068 | 1,000 | -,240 |
| 8 | ,239 | -,043 | ,109 | -,064 | ,051 | -,065 | -,240 | 1,000 |

### *4.2 Scales*

All items were concluded into the predetermined 8 factors and assessed for reliability once again without the deleted items from the factor analysis. 7 of the items where negatively framed, thus these where initially recoded. Results suggest values on all factors above Pallant's (2010) suggestion that values above 0,7 indicate reliability.

*Table 16. Reliability of scales*

| Variable | Items | Cronbach's Alpha score | Reliability assessment |
|---|---|---|---|
| Shopping enjoyment | 4 | 0,90 | Accepted |
| Comparison hopping | 5 | 0,79 | Accepted |
| Price checking | 3 | 0,84 | Accepted |
| Catalogue usage | 4 | 0,89 | Accepted |
| Product evaluation | 5 | 0,77 | Accepted |
| Store evaluation | 5 | 0,88 | Accepted |
| Unplanned purchasing | 7 | 0,87 | Accepted |
| Food culture | 6 | 0,82 | Accepted |

Moreover, mean scores were retrieved to receive an overall indication of the total sample's scores. As can be seen in these scores, the consumers in Sweden generally put high emphasis on price and store evaluation. Moreover, they are typically also concerned with checking prices and comparison shopping. However, scores suggest a low level of catalogue usage and unplanned purchasing.

*Table 17. Mean scores for factors*

| Variable | Mean score |
|---|---|
| Product evaluation | 4,1 |
| Store evaluation | 4,1 |
| Price checking | 3,7 |
| Comparison hopping | 3,4 |
| Shopping enjoyment | 3,1 |
| Food culture | 3,1 |
| Catalogue usage | 2,7 |
| Unplanned purchasing | 2,6 |

### *4.3 Optimal number of clusters*

A two-step approach suggested in the literature (Harris et al, 2007; by Jayasankaraprasad and Kathyayani, 2014) was adopted to determine the segments. First a hierarchical clustering

technique was used to determine the optimal number of clusters. There are a number of different methods for this, however, in this analysis the Ward's method was adopted. The method uses root mean squared to determine cluster homogeneity. Number of cluster are later defined by the changes in SSE (which refers to differences in the sum of squares between two levels). A agglomeration schedule was created using the squared Euclidean distance. The coefficients distributed were used to create a plot graph in order to determine the SSE. The SSE scree could be spotted at the 267$^{th}$ case (see figure 7). This is an indication that the distance of the SSE makes a "jump" (elbow) and hence this level determines the number of clusters according to the Ward's method. Since the total number of cases were 270, the scree at 267 is subtracted from the total cases, indicating that the optimal cluster solution for this analysis is 3 clusters. (Mvsolution, SPSS Tutorial Cluster Analysis, 2017)

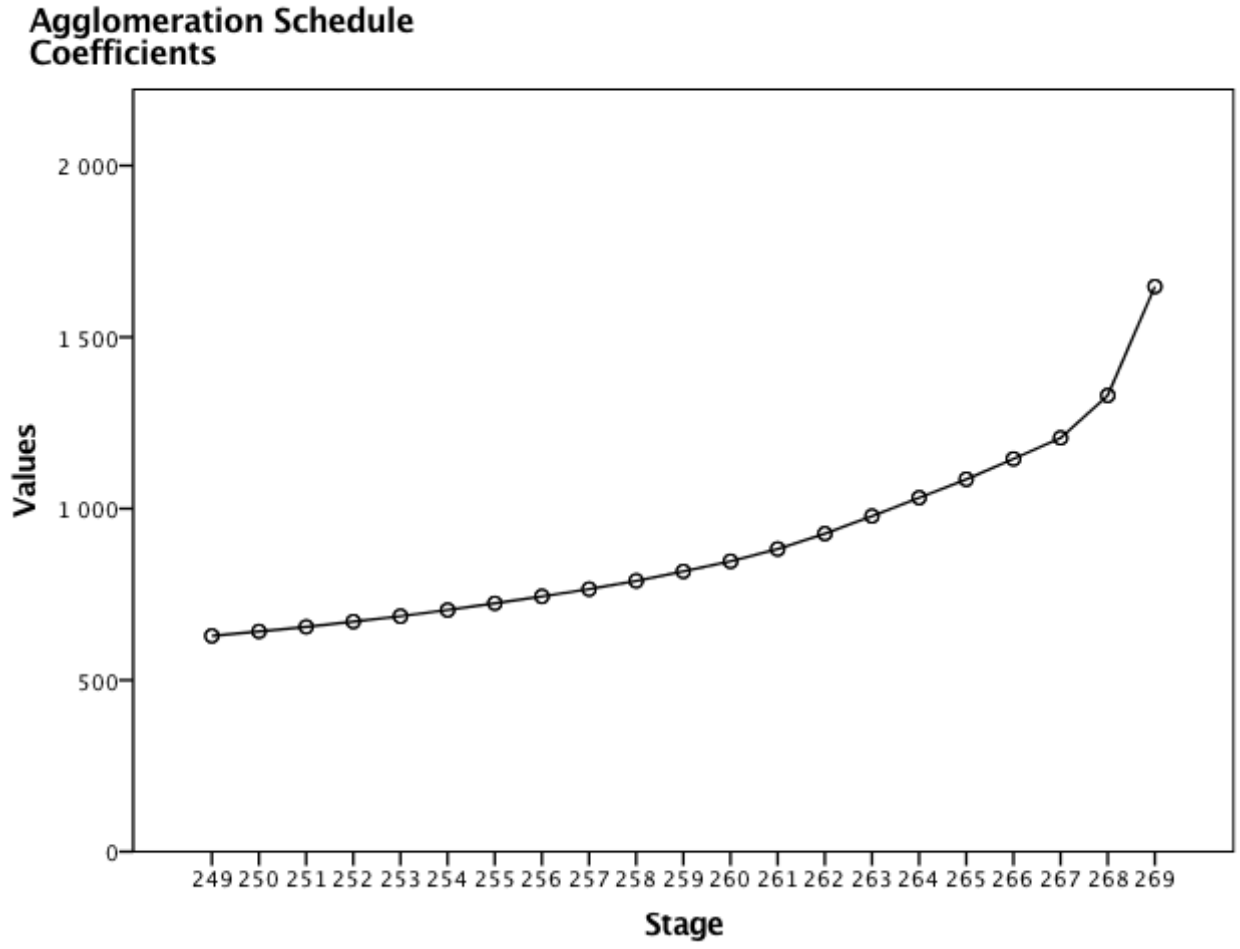


*Figure 7. Scree plot using Ward's method*

### *4.4 Clustering*

After the number of clusters has been decided, the second step of the cluster analysis is to cluster the cases into homogenous groups. To do this a non-hierarchical K-Means clustering technique was adopted and the three clusters determined. The results indicated that the clusters were significantly different (Sig < 0.05) on six out of the eight factors included. The additional two failed to determine homogeneity amongst the sample. While shopping enjoyment, comparison shopping, price checking, catalogue usage, store evaluation, and unplanned purchasing differed significantly for the clusters, product evaluation and food culture where not significantly different amongst the groups. (See table 17)

*Table 17. ANOVA-analysis on factors*

| | | Mean Square | Sig. |
|---|---|---|---|
| Shopping enjoyment | Between Groups | 9,134 | ,000 |
| | Within Groups | ,925 | |
| Comparison shopping | Between Groups | 34,269 | ,000 |
| | Within Groups | ,571 | |
| Price checking | Between Groups | 77,687 | ,000 |
| | Within Groups | ,386 | |
| Catalogue usage | Between Groups | 116,836 | ,000 |
| | Within Groups | ,388 | |
| Product evaluation | Between Groups | ,109 | ,724 |
| | Within Groups | ,337 | |
| Store evaluation | Between Groups | 3,483 | ,001 |
| | Within Groups | ,504 | |
| Unplanned purchasing | Between Groups | 2,231 | ,025 |
| | Within Groups | ,595 | |
| Food culture | Between Groups | ,812 | ,279 |
| | Within Groups | ,633 | |

Additional analysis was conducted to compare the mean scores of the clusters. Since product evaluation and food culture did not reach a significant difference between the clusters, these where removed for this stage and an additional test was conducted to compare the clusters. However, even though the initial ANOVA test suggested a significant difference between the groups, this is in relation to all three of them, while a focus on the separate groups might suggest no difference between i.e. two of the groups. To determine the variance amongst the individual clusters, post hoc tests are accompanied. Thus, Sheffe's test was conducted, for a more

profound analysis of the differences between the groups. The test showed a significant difference for all clusters on three factors: comparison shopping, price checking and catalogue usage. However, on shopping enjoyment there was no significant difference between cluster 1 and 2 (Sig=0,533>0,05). In terms of store evaluation there was only a significant difference between cluster 2 and 3. Finally, unplanned purchasing was only significantly different for cluster 1 and 3. These factors suggest that there are several factors where the clusters are similar to each other and hence the clusters are not highly distinct. (See table 18)

*Table 18. Sheffe's test for variance between clusters*

| Dependent Variable | (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I-J) | Sig. |
|---|---|---|---|---|
| Shopping enjoyment | 1 | 2 | ,15140 | ,533 |
| | | 3 | **,65807*** | ,000 |
| | 2 | 1 | -,15140 | ,533 |
| | | 3 | **,50667*** | ,005 |
| | 3 | 1 | **-,65807*** | ,000 |
| | | 2 | **-,50667*** | ,005 |
| Comparison shopping | 1 | 2 | **,43573*** | ,000 |
| | | 3 | **1,29203*** | ,000 |
| | 2 | 1 | **-,43573*** | ,000 |
| | | 3 | **,85630*** | ,000 |
| | 3 | 1 | **-1,29203*** | ,000 |
| | | 2 | **-,85630*** | ,000 |
| Price checking | 1 | 2 | **,26401*** | ,011 |
| | | 3 | **1,87503*** | ,000 |
| | 2 | 1 | **-,26401*** | ,011 |
| | | 3 | **1,61102*** | ,000 |
| | 3 | 1 | **-1,87503*** | ,000 |
| | | 2 | **-1,61102*** | ,000 |
| Catalogue usage | 1 | 2 | **1,72161*** | ,000 |
| | | 3 | **2,08482*** | ,000 |
| | 2 | 1 | **-1,72161*** | ,000 |
| | | 3 | **,36322*** | ,002 |
| | 3 | 1 | **-2,08482*** | ,000 |
| | | 2 | **-,36322*** | ,002 |
| Store evaluation | 1 | 2 | ,23795 | ,059 |
| | | 3 | -,17854 | ,276 |
| | 2 | 1 | -,23795 | ,059 |
| | | 3 | **-,41650*** | ,002 |
| | 3 | 1 | ,17854 | ,276 |
| | | 2 | **,41650*** | ,002 |
| Unplanned purchasing | 1 | 2 | -,05655 | ,872 |
| | | 3 | **-,32108*** | ,030 |
| | 2 | 1 | ,05655 | ,872 |
| | | 3 | -,26453 | ,106 |
| | 3 | 1 | **,32108*** | ,030 |
| | | 2 | ,26453 | ,106 |

*. The mean difference is significant at the 0.05 level

Although the clusters were not significantly different on all factors included in the construct, there are still several aspects which contribute to the clusters division. Mean scores of the clusters will be analyzed in order to find distinguishing evaluation criteria for conducting grocery shopping.

The first segment where high on information search before their shopping trips, they scored high on checking prices, comparison shopping and catalogue usage. Out of the three segments they enjoyed shopping for groceries the most and did not engage highly in unplanned shopping. Thus, consumers in this segment are considered "Involved shoppers". This group made up 111 respondents of the sample (=41%). Additionally, they are concerned with convenient stores with a high score on the shopping evaluation factor.

The second segment did receive quite balanced score on an average. They scored a little over higher on checking prices, however, they did not score high on catalogue usage. They were neutral in comparing prices and enjoying shopping for groceries. Moreover, they did not really engage in unplanned purchasing. There were no outstanding mean scores for this segment, thus, they are considered "Balanced shoppers". This segment consisted of 94 cases (35%).

The last segment did not engage in catalogue usage or comparison shopping, neither did they check prices. Out of the three segments, they were the ones who enjoyed shopping the least and engaged slightly more in unplanned purchases. The most important aspect for these shoppers were store evaluation. Thus, this segment is considered "Comfortable shoppers". This segment consisted of 65 cases (24%).

*Table 19. Cluster mean scores on factors*

| | **Cluster 1 (n=111)** **Involved shopper** | **Cluster 2 (n=94)** **Balanced shopper** | **Cluster 3 (n=65)** **Comfortable shopper** |
|---|---|---|---|
| **Price checking** | 4,3 | 4,0 | 2,4 |
| **Store evaluation** | 4,2 | 3,9 | 4,4 |
| **Comparison shopping** | 3,9 | 3,4 | 2,6 |
| **Catalogue usage** | 3,8 | 2,1 | 1,7 |
| **Shopping enjoyment** | 3,3 | 3,1 | 2,6 |
| **Unplanned purchasing** | 2,5 | 2,5 | 2,8 |

### *4.5 Segments*

This section will further focus on the categorical factors of the study in order to explain segments demographics and shopping habits. 7 items included in the survey related to demographic factors. These where: gender, age, relationship status, highest education, primary occupation, income and household size. Additionally, 5 items related to shopping behavior and aspects of the shopping trip. These were: average distance traveled to store, primary transportation, average time spent in store, primary shopping format and cross-shopping habits.

*Segment 1: Involved shopper*

The first segment found was the "involved shopper". The categorical variables of this segments will further be described in this section. Involved shoppers are primarily married women. However, the distribution amongst the three relationship statuses married, living with partner and single does not differ highly in values. Age division for this segment is primarily young and older age groups (<26 years=24%, 46-54 years=21,6% and >54 years=15,3%). Another aspect is their educational level, on this aspect the majority of the segment has completed high school or a higher vocational education (58,6%). Few have a lower education (6,3%) and small shares have university or college education (2-3years) or long university education (>4years). However, out the segments, this group has the largest share of long university education (>4years) (18%). Indicating that this group contains slightly more highly educated customers than the others. They are primarily employed, either full-time (49,5%) or part-time (20,6%). There are no retired respondents in this group and a very small share of self-employed (1,8%). The share of students is evaluated to 11,7%. The involved shoppers are typically medium (20 000-30 000 SEK) to high income consumers (36,9%). They also have the largest groups of low income consumers <10 000 SEK out of the segments (18%) and the smallest group of high income consumers (>40 000 SEK, 8,1%). The involved shopper segment typically lives in households of medium sizes 2-3 people (54,1%). (See table 20)

*Table 20. Demographics "Involved shopper" segment*

| | | Count | % |
|---|---|---|---|
| Gender | Men | 20 | 18,0% |
| | Women | 91 | 82,0% |
| Age | <26 | 27 | 24,3% |
| | 26-35 | 21 | 18,9% |
| | 36-45 | 22 | 19,8% |
| | 46-54 | 24 | 21,6% |
| | >54 | 17 | 15,3% |
| Relationship status | Married | 40 | 36,0% |
| | Living with partner | 38 | 34,2% |
| | Single | 33 | 29,7% |
| Highest education | Elementary school | 7 | 6,3% |
| | High school/higher vocational education | 65 | 58,6% |
| | University/college education (2-3years) | 20 | 18,0% |
| | Long university education (>4years) | 19 | 17,1% |
| Primary occupation | Employed and working full time | 55 | 49,5% |
| | Employed and working part time | 23 | 20,7% |
| | Unemployed | 4 | 3,6% |
| | Student | 13 | 11,7% |
| | Self-employed | 2 | 1,8% |
| | Retired | 8 | 7,2% |
| | Other | 6 | 5,4% |
| Monthly income (Before taxes) | 0-10 000 SEK | 20 | 18,0% |
| | 10 000-20 000 SEK | 20 | 18,0% |
| | 20 000-30 000 SEK | 41 | 36,9% |
| | 30 000-40 000 SEK | 21 | 18,9% |
| | >40 000 SEK | 9 | 8,1% |
| Household size | 1 | 17 | 15,3% |
| | 2-3 | 60 | 54,1% |
| | 4-5 | 24 | 21,6% |
| | >5 | 10 | 9,0% |

In terms of grocery shopping characteristics of the "involved shoppers", the majority of the segments travel no more than 2 km to their primary grocery store (<1km =39,6%, 2 km=26,1%). 9,9% travel 3 km and only 3,6% travel 4 km. However, a slightly large group of 20,7% travel more than 4 km, this number is quite similar to the "comfortable shoppers" however, higher than the "balanced shopper". They primary use their cars as transportation mode (64%), or none (i.e. walking) (24,3%). This is the highest share out of the groups for no transportation. The "involved shoppers" typically spend 20-40 min in the grocery store (48,6%) or less (34,2%). In relation to primary shopping format the supermarket is the dominant category (62,2%), or

hypermarket (32,4%). They very rarely shop at convenience stores (5,4%). This segment is typically not projecting very high loyalty and conducts in cross-shopping. Only 15,3% shops in only one store.

*Table 21. Shopping habits "Involved shopper" segment*

| | | Count | % |
|---|---|---|---|
| Average distance to primary grocery store | <1 km | 44 | 39,6% |
| | 2 km | 29 | 26,1% |
| | 3 km | 11 | 9,9% |
| | 4 km | 4 | 3,6% |
| | >4 km | 23 | 20,7% |
| Primary transportation mode to grocery store | Car | 71 | 64,0% |
| | Public transportation | 3 | 2,7% |
| | Bike | 10 | 9,0% |
| | None | 27 | 24,3% |
| Average time spent in grocery store | 0-20 min | 38 | 34,2% |
| | 20-40 min | 54 | 48,6% |
| | 40-60 min | 14 | 12,6% |
| | >60 min | 5 | 4,5% |
| Primary shopping format | Hypermarket (i.e. ICA Maxi, Citygross, Stora Coop) | 36 | 32,4% |
| | Supermarket (i.e. Willys, ICA Supermarket, Netto, Lidl, Ica Kvantum) | 69 | 62,2% |
| | Convenience store (i.e. Willys Hemma, ICA Nära) | 6 | 5,4% |
| | Kiosk | 0 | 0,0% |
| I conduct all my grocery shopping in one store | Yes | 17 | 15,3% |
| | No | 94 | 84,7% |

*Segment 2: Balanced shopper*

The "balanced shopper" also consist primarily of women 71,3%, however, this segment contains a larger share of male shoppers than the other two (28,7%). The age division for this group is very evenly distributed. They are primarily married (41,5%). The division between consumers who are living with a partner or are single is quite evenly distributed on this factor (living with partner=28,7%, single=29,8%). The majority has finished high school or higher vocational education (51,1%). Followed by university or college education (2-3years=31,9%).

The additional educational levels (elementary school and longer university education) are lower than the other two segments. Balanced shoppers are typically employed and working full-time (55,3%) or part-time (16%). This segment contains the highest share of retired consumers (9,6%). Income levels are medium to high for this segment (20 000-30 000 SEK=35,1% or 30 000-40 000 SEK=24,5%). The other two categories are quite low in this segment (10 000- 20 000 SEK and >40 000 SEK). Balanced shoppers generally live in middle size households of 2-3 people (50%). The single household share is the largest out of the segments, however, this difference is minimal from the involved shoppers. A share of 30,9% live in larger households of 4-5 people.

*Table 22. Demographics "Balanced shopper" segment*

| | | Count | % |
|---|---|---|---|
| Gender | Man | 27 | 28,7% |
| | Woman | 67 | 71,3% |
| Age | <26 | 15 | 16,0% |
| | 26-35 | 20 | 21,3% |
| | 36-45 | 20 | 21,3% |
| | 46-54 | 22 | 23,4% |
| | >54 | 17 | 18,1% |
| Relationship status | Married | 39 | 41,5% |
| | Living with partner | 27 | 28,7% |
| | Single | 28 | 29,8% |
| Highest education | Elementary school | 4 | 4,3% |
| | High school/higher vocational education | 48 | 51,1% |
| | University/college education (2-3years) | 30 | 31,9% |
| | Long university education (>4years) | 12 | 12,8% |
| Primary occupation | Employed and working full time | 52 | 55,3% |
| | Employed and working part time | 15 | 16,0% |
| | Unemployed | 2 | 2,1% |
| | Student | 9 | 9,6% |
| | Self-employed | 5 | 5,3% |
| | Retired | 9 | 9,6% |
| | Other | 2 | 2,1% |
| Monthly income (Before taxes) | 0-10 000 SEK | 9 | 9,6% |
| | 10 000-20 000 SEK | 19 | 20,2% |
| | 20 000-30 000 SEK | 33 | 35,1% |
| | 30 000-40 000 SEK | 23 | 24,5% |
| | >40 000 SEK | 10 | 10,6% |
| Household size | 1 | 15 | 16,0% |
| | 2-3 | 47 | 50,0% |
| | 4-5 | 29 | 30,9% |
| | >5 | 3 | 3,2% |

In relation to shopping habits, the balanced buyer, similar to the involved shopper, normally travels <1 or 2 km to their primary grocery store (43,6%, 24,5%). In relation to the other two segments the balanced shopper does typically not travel further than 3 km, with the smallest share of the segments traveling >4 km (16%). Car is their primary transportation, and the share of consumers traveling by car (67%) is in between the involved shopper (lowest share) and comfortable shopper (highest share). They exhibit a preference for shopping at both hypermarkets and convenience stores (25,5%, 13,8%) and generally grocery shop at supermarkets (60,6%). They are medium in relation to loyalty amongst the segments, with a share of 25,5% only shopping at one store.

*Table 23. Shopping habits "Balanced shopper" segment*

| | | Count | Table N % |
|---|---|---|---|
| Average distance to primary grocery store | <1 km | 41 | 43,6% |
| | 2 km | 23 | 24,5% |
| | 3 km | 14 | 14,9% |
| | 4 km | 1 | 1,1% |
| | >4 km | 15 | 16,0% |
| Primary transportation mode to grocery store | Car | 63 | 67,0% |
| | Public transportation | 3 | 3,2% |
| | Bike | 8 | 8,5% |
| | None | 20 | 21,3% |
| Average time spent in grocery store | 0-20 min | 33 | 35,1% |
| | 20-40 min | 46 | 48,9% |
| | 40-60 min | 12 | 12,8% |
| | >60 min | 3 | 3,2% |
| Primary shopping format | Hypermarket (i.e. ICA Maxi, Citygross, Stora Coop) | 24 | 25,5% |
| | Supermarket (i.e. Willys, ICA Supermarket, Netto, Lidl, Ica Kvantum) | 57 | 60,6% |
| | Convenience store (i.e. Willys Hemma, ICA Nära) | 13 | 13,8% |
| | Kiosk | 0 | 0,0% |
| I conduct all my grocery shopping in one store | Yes | 24 | 25,5% |
| | No | 70 | 74,5% |

*Segment 3: Comfortable shopper*

The "comfortable shopper" is the most distinct out of the three segments. The gender division is similar to the involved shopper and is like all segments dominated by women (78,5%). This segment has a high concentration around the middle age groups 26-35, 36-45 and 46-54 years. This segment is lowest in terms of married people (35,4%) and highest in living with partner (35,4%) out of the different shoppers. They have less medium level educated consumers than the other segments and a larger share of both higher and lower educated people. In relation to the share of low educated consumers (elementary school) this segment has double in comparison to the involved shopper and three times as many than the balanced buyer (12,3%). Moreover, university educated consumer are also high in this group for both the average (2-3years) and long (>4years) categories. A total share of 56,9% between the two have a higher-level education. Comfortable shoppers are typically employed full-time (53,8%) and part time (15,4%). No one in this category is unemployed and they have the largest share of self-employed amongst the segments (7,7%). Additionally, this segment has the smallest share of students (6,2%). These occupational divisions are consistent with the age distribution in group. Comfortable buyers are generally high-income consumers with a significantly larger share in the highest income level >40 000 SEK (23,1%). The division between medium to high income is (27,7% and 26,2%). Few people in this segment has an income under 20 000 SEK. Similar to the other segments, comfortable shopper are typically households of 2-3 (50,8%) or 4-5 (33,8%) people.

*Table 24. Demographics "Comfortable shopper" segment*

| | | Count | % |
|---|---|---|---|
| Gender | Man | 14 | 21,5% |
| | Woman | 51 | 78,5% |
| Age | <26 | 7 | 10,8% |
| | 26-35 | 17 | 26,2% |
| | 36-45 | 16 | 24,6% |
| | 46-54 | 17 | 26,2% |
| | >54 | 8 | 12,3% |
| Relationship status | Married | 23 | 35,4% |
| | Living with partner | 23 | 35,4% |
| | Single | 19 | 29,2% |
| Highest education | Elementary school | 8 | 12,3% |
| | High school/higher vocational education | 20 | 30,8% |
| | University/college education (2-3years) | 26 | 40,0% |
| | Long university education (>4years) | 11 | 16,9% |
| Primary occupation | Employed and working full time | 35 | 53,8% |
| | Employed and working part time | 10 | 15,4% |
| | Unemployed | 0 | 0,0% |
| | Student | 4 | 6,2% |
| | Self-employed | 5 | 7,7% |
| | Retired | 5 | 7,7% |
| | Other | 6 | 9,2% |
| Monthly income (Before taxes) | 0-10 000 SEK | 7 | 10,8% |
| | 10 000-20 000 SEK | 8 | 12,3% |
| | 20 000-30 000 SEK | 18 | 27,7% |
| | 30 000-40 000 SEK | 17 | 26,2% |
| | >40 000 SEK | 15 | 23,1% |
| Household size | 1 | 8 | 12,3% |
| | 2-3 | 33 | 50,8% |
| | 4-5 | 22 | 33,8% |
| | >5 | 2 | 3,1% |

The conformable shoppers, like involved and balanced shoppers, generally travel <1 km to their primary store. However, they have a larger share who travels far to their primary store 4 km (6,2%) and >4 km (21,5%). They exhibit the largest share of using car as a transportation mode to their grocery store (70,8%). However, they overall have longer shopping trips than the other shoppers (>60 min = 4,6%). Between the segments, they have the highest share of hypermarkets as a primary shopping format (38,5%), which can also be an explanation for the longer shopping trips. Particularly interesting with this segment is their high degree of loyalty

in comparison with the other segments. A total of 35,4% suggest they only shop at one store, making them the most loyal segment.

*Table 25. Shopping habits "Comfortable shopper" segment*

| | | Count | Table N % |
|---|---|---|---|
| Average distance to primary grocery store | <1 km | 26 | 40,0% |
| | 2 km | 16 | 24,6% |
| | 3 km | 5 | 7,7% |
| | 4 km | 4 | 6,2% |
| | >4 km | 14 | 21,5% |
| Primary transportation mode to grocery store | Car | 46 | 70,8% |
| | Public transportation | 3 | 4,6% |
| | Bike | 4 | 6,2% |
| | None | 12 | 18,5% |
| Average time spent in grocery store | 0-20 min | 21 | 32,3% |
| | 20-40 min | 34 | 52,3% |
| | 40-60 min | 7 | 10,8% |
| | >60 min | 3 | 4,6% |
| Primary shopping format | Hypermarket (i.e. ICA Maxi, Citygross, Stora Coop) | 25 | 38,5% |
| | Supermarket (i.e. Willys, ICA Supermarket, Netto, Lidl, Ica Kvantum) | 33 | 50,8% |
| | Convenience store (i.e. Willys Hemma, ICA Nära) | 7 | 10,8% |
| | Kiosk | 0 | 0,0% |
| I conduct all my grocery shopping in one store | Yes | 23 | 35,4% |
| | No | 42 | 64,6% |

# 5. Conclusion

The purpose of this study was to segment consumers in the Swedish grocery market into homogenous groups. This was conducted with a method suggested by Mortimer (2012) with the addition of a cultural aspect. 8 factors relating to shopper attitudes and preferences determined the cluster formation which was conducted with a K-means cluster analysis after determining the optimal number of cluster with Ward's method. The analysis suggested a three-cluster solution which generated the grocery shopper segments:

1. Involved shopper

2. Balanced shopper

3. Comfortable shopper

The involved shopper exhibited a higher emphasis on information search and comparison shopping. While this segment enjoyed shopping the most out of the three clusters they did not engage highly in unplanned purchasing. Demographics of the segment suggested a higher share of young and old people in comparison to the other shoppers. They typically didn't travel far to their primary store and shopped mainly at supermarkets. However, this cluster was the least loyal out of the three.

The balanced buyer scored quite average in most measures with the exception of catalogue usage, which they principally did not engage in. This segment, like the involved shopper, did not engage in unplanned purchasing. In terms of demographics, the balanced buyer also fell in the middle on most categories and shoppers where generally equally distributed amongst the categories. However, this segment had a higher share of men than the other shopper typologies. These shoppers also shop at stores close to their home and primarily supermarkets. They are slightly more loyal customers than the involved shopper. Which might depend on the fact that they are not as engaged in information search and are therefore more likely to stick to one store.

The comfortable shopper segment is the most distinct out of the three. They put high emphasis on the store and typically shop more in hypermarkets than the other two shopper groups. Moreover, they generally don't check prices or engage in comparison shopping, which might be the reason for their high loyalty to one store. Moreover, comfortable shoppers did not enjoy grocery shopping but still spent more time in the store than the other segments. This might be

explained by fewer shopping trips; however, this aspect was not measured. More low and high educated consumers belonged to this segment and their incomes were in the higher levels.

While some factors failed to be determinant of the variance amongst the sample, the findings are still valuable in some aspects. This indicated that Swedish consumers are quite generic on these aspects and thus indicated that findings are adoptable across all segments. While the score on product evaluation was high for the total sample. This makes it an important aspect for strategy. However, food culture did not receive either a high or low score, indicating a very neutral view on this aspect. Even though previous scholars had suggested a focus on this evaluation criteria for segmentation strategy, the measure failed to deliver anticipated results. This could be because of the large cluster sizes or that the scale developed failed to meet validity.

Another issue which was encountered in the analysis was the insignificant differences between the clusters. This could indicate that the measurements might not be appropriate for segmenting the Swedish grocery consumers. One of the reasons for this insufficient support for variation, could be the context in which the measurements initially were developed by Mortimer (2012). Since the aim of his initial research was to suggest a typology for male grocery consumers, the measurements were developed with this intention and thus might not be appropriate for a more general segmentation approach like this one. However, Mortimer (2013) conducted another study in which he included both men and women, however, this study was already based on the predetermined segments found in his previous research. Hence, cannot be comparable to a development of segments with a cross-gender sample without predetermined segment characteristics.

## 5.1 Limitations

This study was conducted in Sweden, hence cross-cultural generalizations are not possible for the findings. Moreover, segments were clustered based on a predetermined set of variables and thus might fail to address all issues of grocery shopping segmentation variables. This was proven to be the case for some factors which did not hold up in analysis. Moreover, the review of literature was limited to available sources of databases since there is limited economical assets for this project.

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## Dagligvarukunder i Sverige

**Studien utförs med syftet att få en bättre förståelse över vad som driver dagens dagligvarukunder vid inköp av livsmedel. Svaren kommer endast att användas i akademiskt sammanhang och alla svar behandlas anonymt. Ett stort tack för ditt medverkande!**

Kön
(1) ❑ Man
(2) ❑ Kvinna
Ålder

_____
Civilstånd

(1) ❑ Gift
(2) ❑ Sambo
(3) ❑ Ensamstående
Högsta utbildningsnivå

(1) ❑ Grundskola
(2) ❑ Gymnasium/yrkesskola/folkhögskola
(3) ❑ Universitets/högskoleutbildning (2-3år)
(4) ❑ Lång universitets/högskoleutbildning (>4år)
Huvudsaklig sysselsättning

(1) ❑ Anställd och arbetar heltid
(2) ❑ Anställd och arbetar deltid
(5) ❑ Egenföretagare
(6) ❑ Pensionär
(3) ❑ Arbetslös
(4) ❑ Student
(7) ❑ Annat
Månadsinkomst (Brutto)

(1) ❑ 0-10 000
(2) ❑ 10 000-20 000
(3) ❑ 20 000-30 000
(4) ❑ 30 000-40 000
(5) ❑ >40 000
Hushållsstorlek

(1) ❑ 1
(2) ❑ 2-3
(3) ❑ 4-5
(4) ❑ >5

**INKÖP AV LIVSMEDEL**
Genomsnittlig sträcka för resa till mataffär (km)

(1) ❑ <1
(2) ❑ 2
(3) ❑ 3
(4) ❑ 4
(5) ❑ >4
Primärt transportmedel till mataffär

(1) ❑ Bil
(2) ❑ Kollektivtrafik
(3) ❑ Cykel
(4) ❑ Inget
Normal tidsåtgång vid inköp av livsmedel

(1) ❑ 0-20 min
(2) ❑ 20-40 min

(3) ❑ 40-60 min
(4) ❑ >60 min

Primärt inköpsformat för livsmedel

(1) ❑ Storcenter (ex. ICA Maxi, Citygross, Stora Coop)
(2) ❑ Supermarket (ex. Willys, ICA Supermarket, Netto, Lidl, Ica Kvantum)
(3) ❑ Närlivs (ex. Willys Hemma, ICA Nära)
(4) ❑ Kiosk

Jag utför alla mina inköp av livsmedel i en enda butik

(1) ❑ Ja
(2) ❑ Nej

**Välj det alternativ du anser passar bäst in på dig på de förbestämda rankningarna. Endast ett alternativ kan väljas.**

Syn på inköp av livsmedel

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Jag ser fram emot att shoppa livsmedel | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag uppskattar att shoppa livsmedel | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Inköp av livsmedel är en syssla | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Inköp av livsmedel är tråkigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Inköp av livsmedel är jobbigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Jämförelse vid inköp av livsmedel

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Jag är inte villig till extra ansträngning för jämförelse | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag handlar gärna på mer än ett ställe | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jämförelse är inte värt tiden | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag shoppar aldrig på mer än ett ställe | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jämförelse är inte värt ansträngningen | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Kontroll av priser vid inköp av livsmedel

| | Aldrig | Sällan | Neutral | Ofta | Alltid |
|---|---|---|---|---|---|
| Jag kollar prislappar | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag jämför priser innan jag köper | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag kollar summan på mina inköp | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Fokus på kampanjer och specialerbjudande vid inköp av livsmedel

| | Aldrig | Sällan | Neutral | Ofta | Alltid |
|---|---|---|---|---|---|
| Jag förbereder en lista med specialerbjudande | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag förbereder listor från kampanjblad | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper baserat på specialerbjudanden | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag läser kampanjblad | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Vikt av produktegenskaper vid inköp av livsmedel

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Märke är viktigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Näringsinnehåll är viktigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Ingredienser är viktiga | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Kvalitét är viktigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Aptitlig mat är viktigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Värde är viktigt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Viktiga affärsegenskaper vid inköp av livsmedel

| | Inte alls viktigt | Inte viktigt | Neutral | Viktigt | Mycket viktigt |
|---|---|---|---|---|---|
| Enkel parkering | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Lätt tillgång | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Praktiskt läge | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Lätt att hitta | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Lätt att komma till | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Planering av livsmedels inköp

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Jag köper spontant | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper utan att tänka | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper nu och tänker senare | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper impulsivt | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper beroende på hur jag känner mig för tillfället | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag planerar noggrant mina köp | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper hänsynslöst | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

Matkultur

| | Instämmer inte alls | Instämmer inte | Neutral | Instämmer | Instämmer helt |
|---|---|---|---|---|---|
| Jag gillar mångkulturell mat | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag köper importerade livsmedel | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Urvalet av importerade varor är viktigt för mig | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Det kan vara svårt att finna vissa utländska livsmedelsvaror | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag hade önskat ett större utbud av mångkulturella varor | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |
| Jag handlar i specialbutiker för att finna vissa utländska varor | (1) ❑ | (2) ❑ | (3) ❑ | (4) ❑ | (5) ❑ |

## Pilot study

### Attitude

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,798 | ,811 | 5 |

### Comparison shopping

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,878 | ,881 | 5 |

### Price checking

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,928 | ,929 | 3 |

### Catalogue usage

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,765 | ,790 | 4 |

### Product evaluation

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,569 | ,560 | 8 |

### Product evaluation - After deleting items

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,791 | ,801 | 6 |

### Store evaluation

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,870 | ,890 | 5 |

### Unplanned purchases

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,820 | ,819 | 9 |

### Unplanned purchases - After deleting items

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,859 | ,863 | 7 |

### Food culture

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,213 | ,230 | 5 |

**Product evaluation**

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| Product1 | 27,83 | 14,697 | -,388 | ,641 | ,726 |
| Product2 | 28,08 | 6,992 | ,649 | ,677 | ,351 |
| Product3 | 27,67 | 8,788 | ,547 | ,942 | ,434 |
| Product4 | 27,83 | 7,788 | ,788 | ,923 | ,336 |
| Product5 | 27,17 | 11,970 | ,151 | ,878 | ,567 |
| Product6 | 27,42 | 11,538 | ,205 | ,857 | ,556 |
| Product7 | 27,75 | 9,477 | ,549 | ,651 | ,453 |
| Product8 | 27,92 | 11,902 | -,007 | ,720 | ,628 |

**Unplanned purchasing**

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| Planning1 | 21,08 | 27,720 | ,596 | ,888 | ,793 |
| Planning2 | 21,42 | 31,174 | ,240 | ,940 | ,834 |
| Planning3 | 22,17 | 26,515 | ,827 | ,987 | ,769 |
| Planning4 | 21,58 | 32,992 | ,171 | ,884 | ,833 |
| Planning5 | 22,17 | 25,424 | ,854 | ,979 | ,761 |
| Planning6 | 21,75 | 27,841 | ,502 | ,957 | ,804 |
| Planning7 | 21,58 | 29,356 | ,402 | ,562 | ,816 |
| Planning9 | 22,58 | 25,720 | ,589 | ,889 | ,794 |
| Planning88 | 22,33 | 27,697 | ,557 | ,728 | ,797 |

**Food culture**

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| Culture1 | 13,83 | 11,788 | -,631 | ,718 | ,691 |
| Culture2 | 13,33 | 6,242 | ,078 | ,746 | ,197 |
| Culture3 | 13,00 | 5,636 | ,283 | ,730 | -,011[a] |
| Culture4 | 12,42 | 4,629 | ,793 | ,748 | -,432[a] |
| Culture5 | 13,08 | 3,356 | ,486 | ,453 | -,500[a] |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

**Rotated Component Matrix**[a]

| | Component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Planering av livsmedels ink�p - Jag k�per impulsivt | ,862 | ,058 | -,032 | ,028 | -,030 | ,031 | -,018 | -,052 |
| Planering av livsmedels ink�p - Jag k�per nu och t�nker senare | ,830 | -,045 | ,117 | ,016 | -,025 | ,049 | -,095 | -,159 |
| Planering av livsmedels ink�p - Jag k�per utan att t�nka | ,820 | ,007 | ,056 | ,094 | -,046 | ,063 | -,084 | -,111 |
| Planering av livsmedels ink�p - Jag k�per beroende p� hur jag k�nner mig f�r tillf�llet | ,794 | ,057 | -,035 | -,041 | ,022 | ,045 | ,028 | ,160 |
| Planering av livsmedels ink�p - Jag k�per spontant | ,769 | ,094 | -,192 | ,113 | -,080 | -,047 | ,045 | ,000 |
| Planering av livsmedels ink�p - Jag planerar noggrant mina k�p | -,604 | -,079 | ,393 | ,100 | ,058 | ,082 | -,003 | ,027 |
| Planering av livsmedels ink�p - Jag k�per h�nsynsl�st | ,470 | -,012 | ,117 | ,042 | ,043 | ,084 | -,253 | -,321 |
| Viktiga aff�rsegenskaper vid ink�p av livsmedel - L�tt att komma till | ,028 | ,861 | -,038 | ,008 | -,096 | ,102 | ,024 | ,056 |
| Viktiga aff�rsegenskaper vid ink�p av livsmedel - Praktiskt l�ge | ,097 | ,857 | -,110 | ,048 | -,047 | ,042 | ,181 | ,005 |
| Viktiga aff�rsegenskaper vid ink�p av livsmedel - L�tt tillg�ng | ,062 | ,852 | ,043 | ,022 | -,143 | ,080 | ,138 | -,014 |
| Viktiga aff�rsegenskaper vid ink�p av livsmedel - L�tt att hitta | ,086 | ,792 | ,021 | -,019 | ,022 | ,032 | ,156 | ,014 |
| Viktiga aff�rsegenskaper vid ink�p av livsmedel - Enkel parkering | -,048 | ,689 | ,100 | -,078 | -,051 | ,071 | ,033 | -,139 |
| Fokus p� kampanjer och specialerbjudande vid ink�p av livsmedel - Jag f�rbereder en lista med specialerbjudande | -,057 | ,000 | ,883 | -,019 | ,040 | -,080 | ,027 | ,174 |
| Fokus p� kampanjer och specialerbjudande vid ink�p av livsmedel - Jag f�rbereder listor fr�n kampanjblad | -,075 | -,006 | ,878 | ,062 | ,068 | -,126 | ,009 | ,144 |
| Fokus p� kampanjer och specialerbjudande vid ink�p av livsmedel - Jag l�ser kampanjblad | -,032 | ,021 | ,746 | -,001 | ,089 | -,194 | -,064 | ,139 |
| Fokus p� kampanjer och specialerbjudande vid ink�p av livsmedel - Jag k�per baserat p� specialerbjudanden | ,029 | ,060 | ,679 | -,006 | ,059 | -,245 | ,029 | ,325 |
| Matkultur - Jag hade �nskat ett st�rre utbud av m�ngkulturella varor | ,034 | ,016 | ,000 | ,864 | ,029 | -,030 | -,004 | -,051 |
| Matkultur - Jag gillar m�ngkulturell mat | -,065 | -,014 | -,027 | ,719 | ,103 | -,088 | ,191 | ,134 |
| Matkultur - Urvalet av importerade varor �r viktigt f�r mig | -,079 | ,042 | ,104 | ,719 | ,069 | ,016 | ,044 | -,052 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Matkultur - Jag handlar i specialbutiker f&#65533;r att finna vissa utl&#65533;ndska varor | ,066 | -,013 | ,024 | ,716 | ,063 | -,228 | ,042 | -,042 |
| Matkultur - Det kan vara sv&#65533;rt att finna vissa utl&#65533;ndska livsmedelsvaror | ,139 | -,002 | -,023 | ,690 | -,020 | -,040 | ,090 | -,026 |
| Matkultur - Jag k&#65533;per importerade livsmedel | ,040 | -,058 | -,022 | ,598 | -,035 | ,060 | -,114 | ,163 |
| Syn p&#65533; ink&#65533;p av livsmedel - Ink&#65533;p av livsmedel &#65533;r tr&#65533;kigt | ,091 | ,074 | -,066 | -,075 | -,892 | ,066 | -,054 | -,022 |
| Syn p&#65533; ink&#65533;p av livsmedel - Jag ser fram emot att shoppa livsmedel | ,049 | -,106 | ,092 | ,067 | ,881 | -,010 | ,043 | ,073 |
| Syn p&#65533; ink&#65533;p av livsmedel - Jag uppskattar att shoppa livsmedel | ,094 | -,105 | ,044 | ,046 | ,874 | ,015 | ,083 | ,173 |
| Syn p&#65533; ink&#65533;p av livsmedel - Ink&#65533;p av livsmedel &#65533;r jobbigt | ,243 | ,033 | -,064 | -,020 | -,784 | ,181 | -,016 | ,098 |
| J&#65533;mf&#65533;relse vid ink&#65533;p av livsmedel - J&#65533;mf&#65533;relse &#65533;r inte v&#65533;rt tiden | ,093 | ,087 | -,252 | -,017 | -,090 | ,767 | -,012 | -,201 |
| J&#65533;mf&#65533;relse vid ink&#65533;p av livsmedel - J&#65533;mf&#65533;relse &#65533;r inte v&#65533;rt anstr&#65533;ngningen | ,072 | ,077 | -,217 | -,104 | -,034 | ,766 | ,013 | -,194 |
| J&#65533;mf&#65533;relse vid ink&#65533;p av livsmedel - Jag &#65533;r inte villig till extra anstr&#65533;ngning f&#65533;r j&#65533;mf&#65533;relse | ,137 | ,094 | -,121 | ,176 | -,188 | ,721 | -,007 | -,010 |
| J&#65533;mf&#65533;relse vid ink&#65533;p av livsmedel - Jag handlar g&#65533;rna p&#65533; mer &#65533;n ett st&#65533;lle | ,057 | -,060 | ,150 | ,121 | ,102 | -,592 | ,054 | ,018 |
| J&#65533;mf&#65533;relse vid ink&#65533;p av livsmedel - Jag shoppar aldrig p&#65533; mer &#65533;n ett st&#65533;lle | -,070 | ,009 | ,030 | -,126 | ,097 | ,588 | -,109 | -,137 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - M&#65533;rke &#65533;r viktigt | ,050 | ,115 | ,224 | -,129 | ,179 | ,382 | ,332 | -,005 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - N&#65533;ringsinneh&#65533;ll &#65533;r viktigt | ,009 | ,043 | ,058 | ,042 | -,037 | -,162 | ,814 | ,038 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - Kvalit&#65533;t &#65533;r viktigt | -,070 | ,103 | -,070 | ,025 | ,055 | -,019 | ,777 | -,144 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - Ingredienser &#65533;r viktiga | -,004 | ,027 | -,055 | ,132 | -,052 | -,139 | ,774 | ,065 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - Aptitlig mat &#65533;r viktigt | -,047 | ,127 | -,106 | -,026 | ,182 | ,157 | ,562 | ,002 |
| Vikt av produktegenskaper vid ink&#65533;p av livsmedel - V&#65533;rde &#65533;r viktigt | -,096 | ,188 | ,132 | ,076 | ,033 | ,022 | ,541 | ,021 |
| Kontroll av priser vid ink&#65533;p av livsmedel - Jag kollar prislappar | -,117 | ,042 | ,301 | ,059 | ,063 | -,231 | -,030 | ,791 |
| Kontroll av priser vid ink&#65533;p av livsmedel - Jag kollar summan p&#65533; mina ink&#65533;p | -,096 | -,085 | ,285 | ,046 | ,078 | -,095 | ,006 | ,728 |
| Kontroll av priser vid ink&#65533;p av livsmedel - Jag j&#65533;mf&#65533;r priser innan jag k&#65533;per | -,070 | -,056 | ,338 | ,032 | ,063 | -,291 | -,040 | ,717 |