



**LUND UNIVERSITY**  
School of Economics and Management

---

## **Multichannel Segmentation vs. Demographic Segmentation**

The Establishment of a Multichannel Segmentation Model  
for High Involvement Products and a  
Comparison to a Demographic Segmentation Model



### **Master Thesis**

MSc International Marketing and Brand Management 2016/2017  
Lund University  
School of Economics and Management

Markus Büger & Rebecca Hylkén Olsson

Supervisor: Ulf Johansson  
Examiner: Jens Hultman

## **Abstract**

The aim of this study is to generate a multichannel segmentation model for high involvement products and to compare it to the widely spread demographic segmentation. In addition, the study also aims to identify demographic and psychographic profiles to provide a rich descriptive picture of the new customer segments. The study combines the literature of the multichannel and segmentation fields. Moreover, it builds upon the knowledge of previous multichannel segmentation models, which exclusively focused on specific product categories and industries by investigating the effects of a high product involvement on consumers' channel preferences and channel selections. To accomplish these aims, the study at hand utilizes a quantitative approach within the frame of a single case study that focuses on IKEA Sweden. The analysis reveals that the multichannel segmentation model entails a unique set of segments when looking at high involvement products. These segments are strongly directed towards offline channels as three out of four segments showed preferences for offline channels while only one segment showed a slight preference for online channels. Furthermore, two segments selected offline channels exclusively. The other two segments display a multichannel behavior as they selected both offline and online channels for purchasing high involvement products, yet these two segments selected offline channels more recently than online channels. Additionally, the multichannel segmentation model might be a more contemporary relevant segmentation model than the traditional demographic segmentation model. Even though these findings are only directly applicable to the previous research, these findings nevertheless support both, theoretically and practically, the relevance and topicality of research in this field. First, this paper provides a theoretical basis for further investigations that focus on product involvement and second, it establishes a valuable practical instrument to segment and categorize customers within a multichannel environment.

### **Keywords**

Demographic segmentation; multichannel segmentation; product involvement; retail management

## Acknowledgements

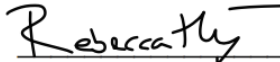
This thesis marks the last chapter in our studies by obtaining the Master of Science in Marketing and Brand Management at the Lund University School of Economics and Management. Looking back at the academic rollercoaster that we took throughout our whole studies, the last ten weeks in which we developed this thesis, were one of the most stressful, but also one of the most rewarding times. The development of this thesis took us on a journey full of new, challenging and inspiring experiences. We would like to thank some people that guided, encouraged and motivated us along the way to reach the final destination of the master program.

First, we would like to thank Ulf Johansson, who always gave us valuable and open feedback, inspired us with academically relevant ideas and motivated us to stay in focus throughout the ten weeks.

Further, we would like to thank IKEA Sweden for providing us with the sufficient information and data to make this thesis a success. A special thanks goes to Cecilia Cederlid, Sanna Cronqvist and Peter Nilsson that believed in our ideas and invested a lot of time in answering our questions and helped us to accomplish our goals, which we highly appreciate.

And last but not least, we would like to thank our family and friends for the mental support, by listening to our thoughts and problems, throughout the ten weeks and also throughout our whole studies.

  
\_\_\_\_\_  
Markus Büger

  
\_\_\_\_\_  
Rebecca Hylkén Olsson

Lund, Sweden, the 24th of May

# Table of Contents

<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 BACKGROUND.....	1
1.1.1 <i>The Revolution of Segmentation</i> .....	1
1.1.2 <i>The Era of Multichannel</i> .....	3
1.2 PROBLEM DEFINITION.....	5
1.3 PURPOSE OF THE STUDY .....	6
1.4 INTENDED CONTRIBUTIONS.....	7
1.4.1 <i>Theoretical Contributions</i> .....	7
1.4.2 <i>Practical Contributions</i> .....	7
1.5 OUTLINE OF THE THESIS .....	8
<b>2. LITERATURE REVIEW .....</b>	<b>9</b>
2.1 MULTICHANNEL RETAILING .....	9
2.2 CHARACTERISTICS OF THE CHANNELS .....	10
2.2.1 <i>Offline Channel</i> .....	11
2.2.2 <i>Online Channel</i> .....	11
2.3 CHARACTERISTICS OF THE PRODUCT.....	12
2.4 CHARACTERISTICS OF THE CONSUMER.....	13
2.4.1 <i>Demographics</i> .....	13
2.4.2 <i>Psychographics</i> .....	15
2.5 THEORETICAL FRAMEWORK .....	17
2.6 CHAPTER SUMMARY .....	18
<b>3. METHODOLOGY .....</b>	<b>20</b>
3.1 THE PHILOSOPHICAL ASSUMPTIONS .....	20
3.2 RESEARCH STRATEGY .....	21
3.3 RESEARCH DESIGN.....	21
3.4 SAMPLING AND DATA COLLECTION .....	22
3.5 MEASUREMENTS .....	24
3.6 DATA ANALYSIS .....	25
3.6.1 <i>The Multichannel Segmentation Model for High Involvement Products</i> .....	26
3.6.2 <i>Profiling the Segments</i> .....	26
3.6.3 <i>Comparison of the Segmentation Models</i> .....	27
3.7 POTENTIAL LIMITATIONS AND WEAKNESSES.....	27
3.8 CHAPTER SUMMARY .....	28
<b>4. RESULTS AND ANALYSIS .....</b>	<b>30</b>
4.1 THE MULTICHANNEL SEGMENTATION MODEL FOR HIGH INVOLVEMENT PRODUCTS.....	30
4.2 PROFILING THE SEGMENTS .....	34
4.2.1 <i>Uninvolved Offliners</i> .....	36
4.2.2 <i>Ambiguous Onliners</i> .....	36
4.2.3 <i>Strict Offliners</i> .....	36
4.2.4 <i>Ambiguous Offliners</i> .....	36
4.2.5 <i>Demographics</i> .....	37
4.2.6 <i>Psychographics</i> .....	40
4.3 COMPARISON OF THE SEGMENTATION MODELS.....	44
4.4 CHAPTER SUMMARY .....	45
<b>5. CONCLUSION .....</b>	<b>46</b>
5.1 THEORETICAL CONTRIBUTIONS .....	47
5.2 PRACTICAL CONTRIBUTIONS .....	48
5.3 LIMITATIONS AND FUTURE RESEARCH.....	50
<b>6. REFERENCE LIST.....</b>	<b>52</b>
<b>APPENDIX A.....</b>	<b>59</b>

**APPENDIX B** ..... 62  
**APPENDIX C** ..... 64

## List of Tables

Table 1: Summary of the benefits and disadvantages of each channel .....	12
Table 2: Percentage change in heterogeneity regarding the clustering solutions .....	30
Table 3: Summary statistics of the profiling variables.....	35
Table 4: Overview of the tested assumptions.....	43

## List of Figures

Figure 1: Positioning of the research.....	4
Figure 2: Illustration of the aim of the research .....	6
Figure 3: Theoretical framework.....	18
Figure 4: The data analysis procedure.....	25
Figure 5: Distribution of the segments .....	31
Figure 6: The differences between the segments .....	33

# 1. Introduction

The introduction chapter will begin with an introduction of the fields of segmentation and multichannel retailing, emphasizing the challenges of traditional segmentation models as well as the opportunities and challenges that accompany the emergence of multichannel retailing. It will be followed with a description of the positioning of this research and the definition of the problem that the study will investigate. Then, the study's main and sub purposes will be presented, which will then be followed by the presentation of its intended theoretical and practical contribution. Lastly, the introduction chapter will provide an overview of the structure of the thesis.

## 1.1 Background

The retail sector is a steadily changing environment, which is governed by different economic, societal and technological factors. Changes in consumption patterns of consumers, as well as developments and trends regarding the way retailers market their products, are tightly connected to the emergence of more diverse lifestyles in Western countries (Wang, Malthouse & Krishnamurthi, 2015; Fuat Firaz & Shultz, 1997). Since retailers offer multiple diverse channels, such as stores, websites or mobile platforms, with which customers interact, consumption is becoming more complex in its nature (Ansari, Mela & Neslin, 2008; Verhoef, Kannan & Inman, 2015; Polo & Sese, 2016). These diverse lifestyles and individualistic consumer behaviors lead to a fragmented market that is characterized by consumers with individual desires and needs. This makes the division and categorization of a market into segments or units increasingly complicated for retailers today (McGoldrick & Collins, 2007; Quinn, Hines & Bennison, 2007).

### 1.1.1 The Revolution of Segmentation

In the past, traditional market segmentation models were a helpful tool for marketing managers to direct their marketing activities towards homogeneous groups, which gave retailers the advantage of targeting groups with similar needs and consumer behaviors (Söderlund, 1998). The traditional segmentation models find their roots in Smith's (1956) definition of market segmentation; that is, the division of a heterogeneous market into more homogeneous sub-markets according to their preferences and wants to meet the customer's expectations more accurately. A market segment is an accumulation of individuals that share the same characteristics, needs and shopping behaviors and that are clearly identifiable as being part of the specific segment (Chin-Feng, 2002). Accordingly, they also clearly distinguish themselves from other market segments. Pride and Ferrell (1983) build on Smith's (1956) definition and argue that every market segment has to be seen as a market in itself, demanding an adjusted marketing strategy and an exclusive message to satisfy its needs. This allows retailers to target and stimulate their target markets more precisely and effectively, which in turn maximizes profitability, customer satisfaction and the overall growth (Krüger & Stumpf, 2013; Venkatesan, Kumar & Ravishanker, 2007). Thus, segmentation is a key concept within the execution of strategic marketing, supporting companies to adapt and deliver their value propositions to specific groups of customers and to simultaneously distinguish themselves from their competitors (Kamineni, 2005) by understanding the diverse needs of different customer segments and their diverse behaviors (Karimi, Papamichail & Holland, 2015). As a result, these actions add more value to products and services.



Traditionally, and most commonly, the segmentation of a market into sub-markets is based on psychographic, demographic, behavioral and geographical variables. For instance, a psychographic segmentation is based on variables like lifestyles, personalities and social classes, whereas the demographic segmentation includes variables such as an individual's age, income, sex, household size or stage in life. In addition to these two approaches, a behavioral segmentation captures the usage rate, purchase occasion and purchase frequency. Lastly, according to the geographical segmentation customers get segmented based on characteristics such as country and region specific sizes or densities (Kotler, Wong, Saunders & Armstrong, 2005). Besides these traditional segmentation models, and responding to changes in consumption patterns and retailing, new forms of segmentation models have routinely emerged, like the multichannel segmentation (Konus, Verhoef & Neslin, 2008; Sands, Ferraro, Campbell, & Pallant, 2016). These are trying to more precisely capture characteristics of various segments in order to better understand the different needs and behaviors than traditional models by taking novel forms of shopping and new retail formats into account. In addition, these new approaches also aim for introducing more suitable tools for companies to make even better business. However, all of the segmentation models that have been introduced in previous literatures assume a heterogeneous market and aim for the division of the whole market into more tangible and homogenous sub-markets.

Within retailing, the demographic segmentation is one of the most popular approaches to segment customers and markets (Fill, 2002; Quinn, Hines & Bennison, 2007; Parment, 2013). Retailers that use demographic variables to segment their customers include for example IKEA, which traditionally segments its customers regarding their living situation (Sanna Cronqvist & Peter Nilsson, personal communication, 21 February 2017), as well as several automotive retailers that separate their markets based on income (McKinsey, 2013). However, using only demographics as the basis for customer segmentation might be inefficient and insufficient to the future of retailing (Parment, 2013; Quinn, Hines & Bennison, 2007). Therefore, customers that share the same demographic variables might still be characterized by various shopping motivations and values, which makes the use of demographics less valuable with regards to the purpose of customer segmentation to form homogeneous segments (Chin-Feng, 2002; Kotler & Armstrong, 1999; Morgan, Levy & Fortin, 2003). Furthermore, demographic segmentation reveals who customers are, but it does not generate deeper insights into their consumer behaviors and interactions with the specific brand (Valentine & Powers, 2013). In this context, Kotler and Armstrong (1999) argue that demographic variables should be accompanied by psychographic variables to generate insights into the psychographic variety within each demographic segment. Thereby, psychographic variables include information about customers' lifestyles, social classes and personalities (Kotler et al. 2005) to generate a better understanding of consumers' shopping motivations and values.

Nevertheless, Quinn, Hines and Bennison (2007) counter that the usage of traditional segmentation models, such as the demographic or psychographic, will be less valuable the more that consumers are empowered. In particular, assumptions that limit consumers to consistent ways of behaviors are seen as critical with respect to the increasing process of fragmentation and empowerment among consumers (Quinn, Hines & Bennison, 2007). However, not only do consumers become more and more fragmented themselves, their interactions with retailers on the basis of the channels they visit also are becoming increasingly diverse (McGoldrick & Collins, 2007). Consumers therefore are increasingly choosing a variety of channels for making a purchase. In this context, only using demographic variables for segmenting might lead to a lack of information regarding the ways of how

people buy in today's market (Nunes & Cespedes, 2003). Schoenbachler and Gordon (2002) even argue that retailers should ground their segmentation on the perception of an empowered and well-informed consumer that prompts a shift away from concentrating on a single retail model and instead to a broader multichannel perspective.

Based on the increasing usage of different channels that come along with the empowerment of consumers, a multichannel segmentation approach has emerged to better meet more digitalized consumer behaviors (de Keyser, Schepers & Konyuş, 2015; Konyuş, Verhoef & Neslin, 2008; Sands et al. 2016). More specifically, Konyuş, Verhoef and Neslin (2008) established a multichannel segmentation model that aimed to group fragmented consumers into homogenous segments based on their preferences and usages of different channels. Their research defined three main segments; these include the *multichannel enthusiasts* that have a preference for all channels, the *store-focused consumers* that favor brick-and-mortar stores and lastly the *uninvolved consumers* that do not favor any of the channels. Moreover, Konyuş', Verhoef's and Neslin's (2008) segmentation model describes the segments with both demographic and psychographic characteristics, which provides an in-depth understanding of the purchase behavior of customers. Thereby, this multichannel model generates a broader view on the variety of channels a retailer offers and on how consumers are influenced by those different channels when purchasing products or services (van Bruggen, Antia, Jap, Reinartz, Pallas, 2010; Verhoef, Kannan & Inman, 2015; Sands et al. 2016). Thus, several researchers indicate that multichannel segmentation is a powerful strategy that in relation to other strategies and activities can assist retailers to meet customers with more fragmented needs.

To pursue this strategy, diverse performance measurements should be evaluated to strategically target the needs of customers and to enhance the overall performance. (Konyuş, Verhoef & Neslin, 2008; Kumar & Venkatesan, 2005; Neslin, Grewal, Leghorn, Shankar, Teerling, Thomas & Verhoef, 2006; Verhoef, Kannan & Inman, 2015). This research will focus on some of these performance measurements that include brand awareness, customer loyalty, customer retention, sales volume and likelihood of purchase. In this context, brand awareness measures consumers' basic knowledge and recognition of a brand name (Hoyer & Brown, 1990), which in turn is highly valuable information as a strong brand awareness enables a differentiation from other competitors in a multichannel environment (Keller, 2009). Moreover, the customer loyalty provides indications on a customer's level of loyalty. A high level implies that the customer is more lucrative in the long run and that the retailer does not need to invest as much in obtaining new customers (Reinartz & Kumar, 2002). Another measurement that has become increasingly important within multichannel retailing is customer retention, which measures a customer's intention to buy again from the same retailer (Bendoly, 2006). Similarly, it is also possible to measure the likelihood of purchase from a specific channel and retailer, which indicates if the consumer is a potentially returning customer. Lastly, sales volume indicates how lucrative the customer is. This is especially interesting to measure for multichannel retailers as Neslin et al. (2006) argue that the usage of multiple channels is positively related to a customer's sales volume. Thus, all presented performance measurements can be used as references point to better meet the needs of customers and to increase the total performance.

### **1.1.2 The Era of Multichannel**

Focusing on multichannel literature in general, consumer behavior within a multichannel environment is a topic that has received remarkable attention in the past (Verhoef, Kannan &

Inman, 2015). Special emphasis has been placed on channel preferences and the channel adoption of customers during their decision-making process (Montoya-Weiss, Voss & Grewal, 2003; Polo & Sese, 2016; Venkatesan, Kumar, Ravishanker, 2007), their channel migration (Venkatesan, Kumar & Ravishanker, 2007; Verhoef, Neslin & Vroomen, 2007) and the consequences in regard to the cannibalization of specific channels or their integration into a multichannel system (Kollmann, Kuckertz & Kayser, 2012; Montoya-Weiss, Voss & Grewal, 2003; Verhoef, Kannan & Inman, 2015). Furthermore, previous studies have identified underlying driving forces and motivations behind channel preferences and shopping behaviors, which disclosed that they were significantly influenced by demographics such as age, sex or income (Dennis Alamanos, Papagiannidis, & Bourlakis, 2016; Girard, Korgaonkar & Silverblatt, 2003; McGoldrick & Collins, 2007; Neslin et al. 2006; Richard & Purnell, 2017; Thomas & Sullivan, 2005; Vasiliu, Felea, Albăstroi, & Dobrea, 2015) and psychographics including elements like convenience, shopping enjoyment or price consciousness (Girard, Korgaonkar & Silverblatt, 2003; de Kerviler, Demoulin & Zidda, 2016; McGoldrick & Collins, 2007; Montoya-Weiss, Voss & Grewal, 2003; Richard & Purnell, 2017; Schoenbachler & Gordon, 2002; Schröder & Zaharia, 2008; Verhoef, Neslin & Vroomen, 2007). This motivated some researchers to develop various shopping typologies to profile consumers regarding their shopping motives and channel selection (Angell, Megicks, Memery, Heffernan & Howell, 2012; Kollmann, Kuckertz & Kayser, 2012; Konuş, Verhoef & Neslin, 2008; Nunes & Cespedes, 2003). In addition, previous research has argued that the drivers and motives of channel preferences are dependent on product type (Chocarro, Cortiñas & Villanueva, 2013) and therefore product involvement (Brunelle, 2009; Zhang & Reichgelt, 2006). However, previous literature emphasized the impact that product involvement has on customers' preference for online or offline channels, there is still an absence of a multichannel segmentation model that focuses on a certain level of product involvement.

The positioning of the research is visualized in Figure 1, which illustrates that the research is positioned in both the segmentation and multichannel literature. Moreover, this research covers the areas of product involvement, psychographics, demographics, channel preference and channel selection.

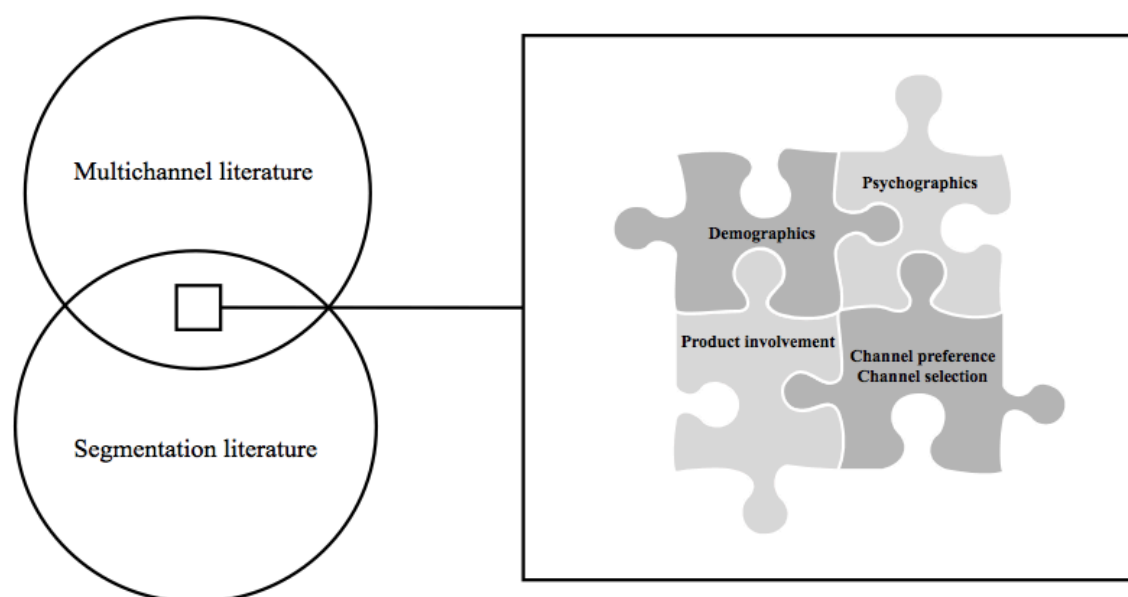


Figure 1: Positioning of the research

## 1.2 Problem Definition

In a retail environment, in which consumption gets more fragmented and consumers are harder to categorize (McGoldrick & Collins, 2007; Quinn, Hines & Bennisson, 2007), the traditional demographic segmentation variables are increasingly criticized for not providing sufficient data about consumers in order to form homogeneous sub-groups (Morgan, Levy & Fortin, 2003). As a response, Konuş, Verhoef and Neslin (2008) created a new segmentation model that focused on both, capturing consumers' multichannel behavior by categorizing the consumers into homogeneous groups according to their channel orientation and describing the segments with demographic and psychographic covariates (Konuş, Verhoef & Neslin, 2008). The model has been replicated in more recent studies (de Keyser, Schepers & Konuş, 2015; Sands et al. 2016), which demonstrates the importance of using multichannel variables and complementing covariates for describing consumers' behavior in a multichannel environment as it provides a more holistic description of the segments. However, a high focus has been put on creating segmentation models for specific product categories (Konuş, Verhoef & Neslin, 2008) and industries (de Keyser, Schepers & Konuş, 2015; Sands et al. 2016), although findings indicate that consumers differentiate their purchase behavior according to product involvement as well (Karimi, Papamichail & Holland, 2015). Accordingly, consumers choose offline channels when buying high involvement products that are associated with a higher risk (Brunelle, 2009) and online channels for low involvement products (Brunelle, 2009; Zhang & Reichgelt, 2006). Therefore, segmenting for high involvement products in a multichannel environment is relevant as these products have traditionally been associated with consumer preferences for only offline channels, yet it is still uncertain if these previous findings hold as people become more empowered and fragmented in their lifestyles and consumption patterns. In this context, the adjusted multichannel segmentation model builds upon the research of Konuş, Verhoef and Neslin (2008), and identifies how customers behave differently within the multichannel environment when purchasing high involvement products as well as integrate psychographic and demographic covariates to describe the characteristics of the subgroups. In contrast to the previous literature, there will be a focus on the product involvement and particularly on high involvement products. Thus, the formation of an adjusted segmentation model would combine findings of multichannel and segmentation literature, generate a more holistic and contemporary relevant understanding of consumers and formulate more integrated findings that are feasible in practice.

Based on the increasing fragmentation and empowerment of consumers, but also by taking technological advancements within the retailing industry into account, the integration of the demographic and psychographic covariates into the multichannel behavior segmentation will thus be more relevant in future retailing and should be further investigated. Especially when considering that the majority of retailers still segments their customers based only on demographic variables (Quinn, Hines & Bennisson, 2007), even while they are increasingly following a multichannel strategy (Konuş, Verhoef & Neslin, 2008; McGoldrick & Collins, 2007; Verhoef, Kannan & Inman, 2015; Polo & Sese, 2016), it is nevertheless valuable to compare the multichannel segmentation model with the traditional demographic segmentation approach. Thus, it is critical to investigate which segmentation model most appropriately fits modern retailing. A comparison allows to test if the multichannel segmentation model is able to cover more variance of consumers' behaviors and explains their needs and behaviors more appropriately.

### 1.3 Purpose of the Study

The purpose of this research is to establish a multichannel segmentation model for high involvement products and to compare it to the traditional demographic segmentation.

More specifically, the aim is to extend the area of segmentation by constructing a segmentation model for high involvement products that categorizes customers based on their multichannel behavior. The novel model would build upon the research of Konuş, Verhoef and Neslin (2008) and thus categorize customers based on their preference for and selection of online or offline channels. However, the adjusted model will focus on high involvement products as it is still uncertain if previous findings, which claim that consumers choose offline channels for purchasing these products, are applicable to segmenting more fragmented customers in the multichannel environment. Moreover, to respond to the need of delivering a more detailed and comprehensive picture of customers in the multichannel environment, this research aims to describe and analyze demographic and psychographic characteristics that tend to occur with specific segments. Finally, to analyze the value for retailers, the multichannel segmentation model it will be tested against the traditional demographic segmentation model. This comparison aims to identify which of the segmentation models most appropriately fits modern retailing by comparing how these models explain performance measurements such as customer retention, brand awareness, customer loyalty, sales volume and likelihood of purchase.

The purpose is visualized in the illustration in Figure 2, which first illustrates the establishment of the multichannel segmentation model for high involvement products that includes descriptions of the segments' demographic and psychographic characteristics. In addition, it visualizes the comparison of the multichannel segmentation model with the demographic segmentation based on performance measurements.

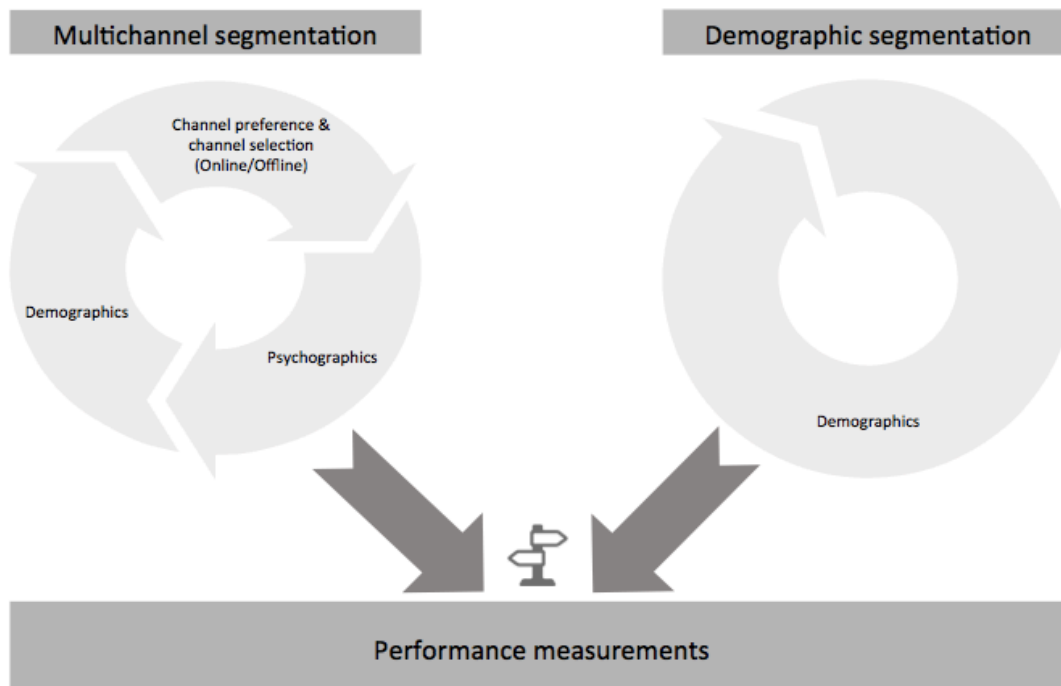


Figure 2: Illustration of the aim of the research

## **1.4 Intended Contributions**

The findings will contribute both theoretically and practically, as well as generate important insights that are relevant for research and companies operating within a multichannel environment.

### **1.4.1 Theoretical Contributions**

The study at hand will build upon the multichannel and segmentation literature by establishing a multichannel segmentation model based on the findings of Konuş, Verhoef and Neslin (2008). In contrast to previous literature, it will focus on high involvement products, which will provide the field of segmentation and multichannel research with further insights of how customers can be segmented within a high level of product involvement. This in turn will generate knowledge beyond the boundaries of product categories (Konus, Verhoef & Neslin, 2008) and industries (de Keyser, Schepers & Konuş, 2015; Sands et al. 2016) that have previously been the focus of the literature. As all products and related industries can be categorized as being or involving either low or high involvement products, the adjusted segmentation model will enable us to establish the basis for the generation of segments that are more generalizable to many product types or industries. Furthermore, this study complements established knowledge since findings of the past might not be applicable for high involvement products.

Moreover, the segments within the multichannel segmentation model will be profiled according to both their demographic and psychographic characteristics, which follows the logic of Chin-Feng (2002) who argues that demographics and psychographics are preferably described together. More specifically, in the previous literature the selected profiling variables have been found to influence the channel preference or the channel selection (Chocarro, Cortiñas & Villanueva, 2013; Dennis et al. 2016; Girard, Korgaonkar & Silverblatt, 2003; de Kerviler, Demoulin & Zidda, 2016; McGoldrick & Collins, 2007; Montoya-Weiss, Voss & Grewal, 2003; Neslin et al. 2006; Richard & Purnell, 2017; Schoenbachler & Gordon, 2002; Schröder & Zaharia, 2008; Thomas & Sullivan, 2005; Vasiliu et al. 2015; Verhoef, Neslin & Vroomen, 2007). The research at hand will use these variables to attain an indication and theoretical basis of which of the variables are valuable when describing the segments of the segmentation model.

Lastly, the comparison with the traditional demographic segmentation allows for the evaluation of the multichannel segmentation model. Even though several studies have found that a multichannel segmentation benefits the understanding of the contemporary needs of consumers (Konus, Verhoef & Neslin, 2008; de Keyser, Schepers & Konuş, 2015; Sands et al. 2016), and that demographic segmentation is in turn criticized for lacking these benefits (Morgan, Levy & Fortin, 2003), these models have not been tested in relation to one another. Thus, a comparison of the models would be valuable in theory, as it would indicate which of the models more appropriately explains consumption patterns of fragmented customers today.

### **1.4.2 Practical Contributions**

Since the formation of homogeneous target groups is increasingly difficult for retailers today (Quinn, Hines & Bennison, 2007), this research contributes with the introduction of a tool that

aspires to make segmentation within a multichannel environment more effective and feasible than using traditional demographic segmentation. Consequently, the insights from this study will allow for the increase of knowledge on how to design different channels and where and how to target specific customer segments to better meet their needs. In this context, it would allow for stimulating target markets with different multichannel behavior more strategically and effectively by delivering accommodated value propositions to specific groups of customers. This in turn might positively affect profitability, customer satisfaction and overall growth (McGoldrick & Collins, 2007; Kamineni, 2005; Karimi, Papamichail & Holland, 2015; Quinn, Hines & Bennison, 2007). To summarize, this study supports companies in the understanding of fragmented customers and gives guidance to the operation of individualized marketing strategies and the execution of market segmentations to better understand and meet customers' expectations and needs. Since this research will focus specifically on high involvement products, it strives to establish a more suitable foundation of future customer segmentations for companies offering high involvement products.

## **1.5 Outline of the Thesis**

To achieve the aim of the research, the study is divided into five chapters. While the first chapter discussed limitations of previous literature and stated the purpose and contributions of the study, the second chapter will present a theoretical review of previous research regarding multichannel behavior, psychographic variables and demographic variables. The literature review will provide assumptions based on previous findings and will conclude with a theoretical framework. Third, the research design will be explained, including data collection and analysis methods. Thereafter, the results of the analysis will be presented and discussed in the fourth chapter. Lastly, the fifth chapter will summarize the study and provide insights regarding conclusions, theoretical and practical contributions and suggestions for future research.

## 2. Literature Review

The focus of the literature review is to first describe the multichannel retailing stream with an emphasis on multichannel segmentation, as this will act as the foundation for the established segmentation model. Second, channel characteristics that were found to have had an impact on channel preference and channel selection will be described. Opportunities and risks that are attached to the selection of a specific channel will also be presented. Third, product characteristics will be evaluated with a focus on product involvement to understand the complexity of customers' preferences for different channels. Fourth, the influence of selected demographics and psychographics characteristics will be discussed that will function as profiling variables in the clustering of the multichannel purchasing behaviors. This will generate deeper insights regarding the effects of consumer characteristics on channel preferences and channel selections. Lastly, the theoretical framework will be introduced, which is based on the presented models, concepts and theories.

### 2.1 Multichannel Retailing

To be able to build the foundation of the new segmentation model, it is important to understand the general concept of multichannel retailing as well as consumers' behavior within this environment. Multichannel retailing incorporates activities that are needed for selling, advertising and distributing services and products to consumers in more than one channel (Levy & Weitz, 2009). This gives retailers the opportunity to provide customers with an integrated shopping experience when using different channels. More specifically, multichannels can provide customers with information that suits their individual interests and needs, but also allows companies to personalize promotional offers and improve the perceived shopping value and overall enjoyment (McGoldrick & Collins, 2007; Sands et al. 2016). Due to an increasing adaptation rate of new technologies in recent decades (Wang, Malthouse & Krishnamurthi, 2015), multichannel marketing has become increasingly important in the retailing industry and has drastically changed the business models of retailers, but also introduced new ways of how consumers shop and consume (McGoldrick & Collins, 2007; Verhoef, Kannan & Inman, 2015; Polo & Sese, 2016). In this context, the number of retailers using multichannel marketing has grown remarkably and is currently seen as the new standard in retailing (Konus, Verhoef & Neslin, 2008).

This development not only has had an impact on the marketing and sale of products, but it also has had consequences for more strategic questions such as the division of the whole customer base into more concrete sub-units. This is based on the fact that interactions between retailers and customers happen within multiple channels, which in turn are selected by different customers. Thus, a customer's multichannel behavior got increasingly considered within customer segmentation strategies, in theory as well as in practice. Referring to this, Konuş, Verhoef and Neslin (2008) introduced three main segments that show different channel preferences and that have been adapted in following studies: multichannel enthusiasts, store-focused and uninvolved consumers. In more recent research, the segments of the study of Konuş, Verhoef and Neslin (2008) have been both criticized and supported. Sands et al.'s (2016) findings support the existence of the multichannel enthusiast segment, whereas it is not supported in the study of de Keyser, Schepers and Konuş (2015). Furthermore, Sands et al. (2016) found limited support for the store-focused segment for most product categories in their study, with an exception for consumers within clothing retailing. In contrast, de Keyser, Schepers and Konuş (2015) support the store-focused segment in their



replication of the segmentation approach in the telecom industry. Thus, there are apparent contradictions in the literature of the characteristics of the segment within multichannel segmentation, which implies that there is a need for further investigation within multichannel segmentation. In addition, these contradictions are mainly formulated with regards to specific product categories or industries, yet studies have revealed that the product involvement also highly influences customers in their channel preference and selection (Brunelle, 2009; Konus, Verhoef & Neslin, 2008). Therefore, it is assumed that the focus on product involvement rather than product categories or industries, will offer different characteristics of the segments in the adjusted multichannel segmentation concept.

## **2.2 Characteristics of the Channels**

It can be found that the preference and selection of specific channels can be based on characteristics of channels, the products and the customers themselves. In general, a channel preference is based on the individual perception of costs and benefits, which are perceived differently within each channel (Riquelme, Roman & Iacobucci, 2016). Consumers focus on maximizing benefits and minimizing costs, depending on the perceived costs that are attached to an alternative. When the perceived costs are high, the minimization of potential costs is emphasized, while the maximization of benefits is of interest when the perceived costs are low (Polo & Sese, 2016). These findings highlight the nature of the relationship between perceived costs and benefits as being negative, meaning the higher the perceived costs, the lower the perceived benefits and vice versa (de Kerviler, Demoulin & Zidda, 2016). Regarding the different characteristics of every channel, customers continuously evaluate advantages and disadvantages of using diverse channels for purchasing products (Keeney, 1999; Shih, 2004). These channels traditionally include online channels (internet based, such as e-commerce at the online shop or mobile channels at the smartphone) and offline channels (brick-and-mortar stores, further referred to as stores) (Konus, Verhoef & Neslin, 2008). They function as a medium for retailers to interact with customers in a one-way or two-way communication, or for transactions (Neslin et al. 2006). Recently, new channels have been introduced and added to multichannel retailing such as various social media platforms (Rapp, Beitelspacher, Grewal, Hughes, 2013). These channels act as a platform for marketing, communication and distribution purposes between retailers and customers and allow them to promote products and to create an appealing customer experience (Kaplan & Haenlein, 2010), however the actual purchase is only indirectly possible in these channels as they lead customers to the mobile website or the online store via a link. Thus, although social media channels are an important part within the multichannel environment, they are not seen as being relevant for this study as the purchase stage will be investigated only. Building on the offering of the traditional online and offline channels, customers' behaviors have become more complex in their nature because customers use a diversity of channels during their purchase process (Ansari, Mela & Neslin, 2008; Verhoef, Kannan & Inman, 2015; Polo & Sese, 2016). Vasiliu et al (2015) go further and argue that customers might even consult both online and offline channels in the same purchasing process, which makes the border between channels more blurred (Sands et al. 2016; Verhoef, Kannan & Inman, 2015). Thus, the advantages and the disadvantages of the different channels will be described in the following paragraphs to better understand the channel characteristics that influence channel preferences. A summarized overview of the advantages and disadvantages of various channels can be found in Table 1.

### **2.2.1 Offline Channel**

One of the most traditional channels in retailing is the store, which still captures 90% of the sales within retail (Sands et al. 2016), and offers customers several benefits. Before making the purchase, customers can touch and feel the products as well as get personal service from the personnel (Sands et al. 2016, Zhang, Farris, Irvin, Kushwaha, Steenburgh, Weitz, 2010). From a risk perspective, these activities actively work to reduce the perceived risk for the customer when doing the purchase. Moreover, stores offer the benefit of immediate acquisition and the option to pay in cash, which is often not possible within online channels (Zhang et al. 2010). Given these points, the offline channel is usually favored by customers when purchasing high involvement products, since the personal service offers a benefit of risk reduction (Brunelle, 2009). However, the disadvantage of the offline channel is that it requires more time and effort on the part of the customer to visit the store, as well as when comparing products' attributes and prices. Moreover, stores have limited opening hours and a fixed location, which might be inconvenient for the customer (Sands et al. 2016, Zhang et al. 2010). In terms of high involvement products, the decreased risk of purchasing through offline channels outweighs the time-consuming information search process and higher travel costs (Brunelle, 2009).

### **2.2.2 Online Channel**

In Sweden, one of three consumers claimed that their last purchase was made through an online channel (HUI Research, 2017). In this study, the online channels focus on the online shop and mobile channels as both are channels connected to the Internet and show very similar characteristics. In reference to the online shop, it is the second largest retailing channel and it has grown in a rapid rate since it was commercialized 20 years ago (Razak, Ilias & Rahman, 2009). The online shop offers customers benefits in terms of time and effort savings, as the customer does not need to spend time on travelling to the store (Sands et al. 2016; Zhang et al. 2010) and the purchase is more flexible since the online shop does not restrict customers to certain opening hours or locations (Sands et al. 2016; Zhang et al. 2010). The mobile channel, which has the highest expected growth among the retail channels (Sands et al. 2016; Wang, Malthouse & Krishnamurthi, 2015), makes up 35% of the purchases within e-commerce in Sweden (HUI Research, 2017). The mobile channel differs from the website channel since it offers customers the benefit of making a purchase anywhere at any time (Lee, 2009; Shankar, Venkatesh, Hofacker, Naik, 2010). Thus, the mobile channel has transactional capabilities, and it improves the online shopping experience (Wang, Malthouse & Krishnamurthi, 2015). Despite the fact that online channels offer several benefits to the customers, these types of channels are simultaneously associated with more risk (Fernandez-Sabiote & Roman, 2016; Sands et al. 2016). Therefore, it is essential to also take the disadvantages of online channels into consideration, as these are said to highly affect the channel preference and selection when purchasing high involvement products.

The primary disadvantage of online channels is the lack of personal contact, which strengthens the association of online channels with a higher level of risk than offline channels (Fernandez-Sabiote & Roman, 2016; Sands et al. 2016). Although attempts are being made to increase the service level within online channels, such as animated sales agents, online channels are still lacking the emotional and social contact with and advices from personnel, which is an advantage in offline channels (de Kerviler, Demoulin & Zidda, 2016). Given the advantages and disadvantages of online channels, the risk that is associated with both high

involvement products and online channels might outweigh the benefits such as accessibilities and time savings (Brunelle, 2009; Zhang & Reichgelt, 2006).

*Table 1: Summary of the benefits and disadvantages of each channel*

Channel	Advantages	Disadvantages
Store	<ul style="list-style-type: none"> <li>· Personal service</li> <li>· Immediate acquisition</li> <li>· Cash payment option</li> </ul>	<ul style="list-style-type: none"> <li>· Time and effort consuming</li> <li>· Fixed opening hours and locations</li> </ul>
Online Shop	<ul style="list-style-type: none"> <li>· Flexible and less dependent on location than the store</li> <li>· Decreased time, effort and travel cost</li> </ul>	<ul style="list-style-type: none"> <li>· Lack personal contact and service</li> <li>· Not possible to use the five senses as a part of the customer experience</li> </ul>
Mobile	<ul style="list-style-type: none"> <li>· Possibility to make a purchase anywhere at anytime</li> <li>· Convenient transactions</li> </ul>	

### 2.3 Characteristics of the Product

The preference for offline or online channels cannot only be ascribed to characteristics of the channels themselves, but it is also dependent on the level of product involvement. Thereby, the level of involvement that the purchase of a product requires has an impact on a consumer's decision to prefer one channel over another one (Konus, Verhoef & Neslin, 2008). This is mainly based on the perceived risk of the customer experiences, which is attached to the characteristics of the product, such as the price, complexity or frequency of the purchase (Brunelle, 2009). According to this, Krugman (1965) was the first one to introduce the two concepts of low involvement products and high involvement products. On the one hand, low involvement products like candles are characterized by a high frequency of purchase and are therefore seen as convenience products that involve low financial or physical risks (Murphy & Enis, 1986). These products are perceived as less important by customers (Elg & Hultman, 2016) and therefore require a shorter information search process and a lower degree of cognitive involvement (Petty, Cacioppo & Schumann, 1983; Leven, 1983). High involvement products, on the other hand, are often special products that are not purchased on a regular basis, such as a sofa. They are characterized by high degrees of risks and costs in terms of money and time (Murphy & Enis, 1986) and involve a longer information search process and a higher degree of cognitive involvement as their purchases are perceived as being riskier (Gilovich, Keltner & Nisbett, 2011; Leven, 1983).

Going back to the fact that the perceived risks are one of the most important factors moderating the impact of product involvement on channel preferences (Brunelle, 2009), several studies find that the likelihood of preferring online channels is higher when customers purchase low involvement products (Brunelle, 2009; Zhang & Reichgelt, 2006). Conversely, customers favor offline channels when buying high involvement products, as these channels allow stronger interactions through personal services, which decrease the risk associated with the purchase (Brunelle, 2009). Accordingly, it is assumed that:

*Customers will mainly prefer and select offline channels for purchasing high involvement products.*

Furthermore, the level of involvement is also found to influence the strength of channel preferences. Leaning on the uninvolved consumer segment of Konuş, Verhoef and Neslin (2008), it can be anticipated that the absence of involvement when purchasing products favors the occurrence of not preferring any channel within the multichannel environment. On the contrary, Brunelle (2009) argues that a high product involvement leads to stronger channel preferences of consumers. Based on these points, it is assumed that:

*In terms of purchasing high involvement products a low amount of customers prefers and uses both online and offline channels.*

## **2.4 Characteristics of the Consumer**

In addition to the characteristics of the product and the channel, characteristics of the consumer have also been emphasized within previous literature and researchers could show significant effects for various psychographic and demographic variables. Since the research aims to establish a multichannel segmentation model for high involvement products with a more holistic view of customers, the segments will be profiled according to demographics and psychographics characteristics.

### **2.4.1 Demographics**

In this section, a description of the demographic variables that previously were shown to affect customers' channel preference is given. The previous literature provides insights into how various demographic variables impact consumers' channel preferences and selections. However, some demographic variables re-occur in the multichannel literature and were therefore considered to be especially interesting to be further investigated in the context of profiling a multichannel segmentation model for high involvement products. These demographic variables include *age* (McGoldrick & Collins, 2007; Neslin et al. 2006; Richard & Purnell, 2017), *sex* (Girard, Korgaonkar & Silverblatt, 2003; Richard & Purnell, 2017; Vasiliu et al. 2015), *education* (Frag, Schwane & Dijst, 2005; Girard, Korgaonkar & Silverblatt, 2003; McGoldrick & Collins, 2007; Neslin et al. 2006), *income* (Girard, Korgaonkar & Silverblatt, 2003; McGoldrick & Collins, 2007; Vasiliu et al. 2015), and *living situation* (McGoldrick & Collins, 2007; Neslin et al. 2006). These five variables will be described in the following to further understand how these occur with different preferences for and selections of online and offline channels. This will act as the basis for assumptions on how segments with different channel preferences should be demographically characterized.

#### *Age*

Within the previous literature, *age* is one of the most widespread predictors for channel selection (McGoldrick & Collins, 2007; Neslin et al. 2006, Richard & Purnell, 2017). Research indicates that young people are more likely to use online channels, since they are seen as belonging to Generation Y, which is characterized by having more online experience, whereas individuals that are older than 45 years tend to show a lower preference for using online channels (McGoldrick & Collins, 2007; Richard & Purnell, 2017; Parment, 2013). The older generation is also less likely to own a smartphone or go online, and have lower trust in technology (Dennis et al. 2016). Based on these findings, it can be assumed that:

*Segments that prefer and select online channels contain members of a younger age than segments that prefer and select offline channels, which should accordingly contain members that are characterized by an older age.*

### **Sex**

The second demographic variable is *sex*, which is, according to Girard's, Korgaonkar's and Silverblatt's (2003) research, the strongest predictor for channel preferences. Their study exposed a pattern between the sexes' channel preferences for specific product characteristics. According to Girard, Korgaonkar and Silverblatt (2003), men have a higher preference for online channels both when the product characteristics are easy and difficult to evaluate in advance than women. These findings also find support in more recent studies, as men have been found to have a higher preference for online channels than women in general (Richard & Purnell, 2017). This might be based on the fact that men are found to be more financially risk-taking than women (Charness and Gneezy, 2012) and are thus more likely to take the risks of selecting an online channel. Thus, it can be assumed that:

*Segments that prefer and select online channels for purchasing high involvement products online are expected to contain more male members and, accordingly, segments with predominantly offline preferences and offline channel selections should contain more female members.*

### **Education**

Third, there is a debate in the literature whether or not *education* can explain channel preferences. On the one hand, some research has shown significant relations between using online channels and higher education (Girard, Korgaonkar & Silverblatt, 2003; Neslin et al. 2006) as education is found to trigger more financially risk taking behavior (Black, Devereux, Lundborg & Majlesi, 2015). In this context, one study showed that education and purchasing online is especially related when it comes to goods where the product characteristics can be easily observed prior the purchase (Girard, Korgaonkar & Silverblatt, 2003). On the other hand, some research has not found any significant association between the channel preference and education (McGoldrick & Collins, 2007). As a consequence of the contradictions in the literature, one could assume that:

*Segments that prefer and select online channels have more members with higher education, but the education might also only play a minor role in influencing the channel preference.*

### **Income and Living Situation**

In prior multichannel research, there are indications that the income and the living situation can have a direct or a moderating effect on the channel preference and are thus suitable variables to describe the segments. According to Girard, Korgaonkar and Silverblatt (2003), income is related to purchasing products with features that are simple to view beforehand. Grable (2000) goes further and argues that people with a higher income are more financially risk taking than people with a lower income. This leads to the assumption that income might positively affect the preference and selection of online channels. However, other researchers

argue that income does not alone have a meaningful impact on the channel choice, and thus it should be complemented by other variables (McGoldrick & Collins, 2007; Blanca, Julio, & José, 2011). Thus, income alone or in combination with other variables appears to influence the channel preference and selection, which makes further investigations interesting in the context of purchasing high involvement products. Likewise, the living situation is mentioned in the literature to have an impact on channel preferences as well as if a person prefers shopping from one or various channels (McGoldrick & Collins, 2007; Neslin et al. 2006). Despite an absence of understanding directly how this characteristic is affecting the channel preference, there are indications that different living situations can influence channel preferences and are therefore expected to trigger various channel preferences, which also makes further investigations interesting in the context of purchasing high involvement products.

However, Blanca, Julio, and José (2011) criticize the argument that demographic variables such as age, income and sex can explain customers' channel preferences in the multichannel environment alone. Thus, by complementing demographics with psychographic variables, more valuable insights about customers' behaviors can be generated (Chin-Feng, 2002; Kotler & Armstrong, 1999).

#### **2.4.2 Psychographics**

Next to the demographic analysis of customers' channel preferences and selections within multichannel literature, research argues that psychographics influence customers' multichannel behavior as they generate diverse shopping motives (Fernandez-Sabiote & Roman, 2016). Thus, a description of the previously studied psychographic variables that have been said to affect the channel preference and selection will be presented in this section and, in the context of this study, they will also serve as profiling variables for the segments of the adjusted segmentation model.

Within previous literature, some psychographic factors were re-occurring and therefore deemed to be more relevant regarding a consumer's multichannel behavior than others. The factors that were found to greatly influence a consumer's channel preference for making a purchase include the convenience orientation, service orientation and risk aversion (Kollmann, Kuckertz & Kayser, 2012). Hence, the evaluation and perception of costs and benefits of various channels can be based on consumers' various needs for services or conveniences, among other factors, which are closely related to their shopping motivations (Konus, Verhoef & Neslin, 2008). Therefore, the most relevant factors will be discussed more in-depth in the following paragraphs to be able to understand multichannel customers better and to be able to construct a psychographic picture.

##### ***Convenience Orientation***

Based on previous studies, assumptions can be supported that the convenience orientation of a customer has a significant effect on channel preferences and selections regarding the purchase (Angell et al. 2012; Girard, Korgaonkar & Silverblatt, 2003; Kollmann, Kuckertz & Kayser, 2012; Madlberger, 2006; Schröder & Zaharia, 2008). In this context, a convenience-oriented shopping attitude is defined as a rational approach, in which individuals evaluate costs and benefits by comparing each channel (Kollmann, Kuckertz & Kayser, 2012; Schröder &

Zaharia, 2008). The convenience oriented shopping attitude is embedded in an underlying shopping motivation that is completely controlled by ease of access, including time restrictions, transportation efforts and physical and mental efforts in general (Angell et al. 2012; Rohm & Swaminathan, 2004); Schröder & Zaharia, 2008). In this context, Kollmann, Kuckertz and Kayser (2012) found that customers' convenience orientation positively affects the decision to purchase a product through an online channel, because online channels are typically associated with convenience, flexibility and availability in comparison to offline channels (Polo & Sese, 2016). This indicates that convenience might be a more important factor in the decision of using an online channel than an offline channel. This assumption is supported by Richard's and Purnell's (2017) finding that convenience is not the most important factor in the selection of offline channels, but increases in its importance within the online environment. Thus, it can be assumed that:

*Members with higher levels of convenience orientation occur in segments that prefer and select online channels. In contrast, segments that prefer and select offline channels should predominantly contain members that are less concerned about the shopping convenience.*

However, the effect is highly dependent on the product type, which influences a customer's involvement in the purchase and, in turn, affects the perceived risks attached to using a channel. In terms of products types with characteristics that can easily be observed before the purchase, such as a book, convenience is a strong factor leading a consumer's intention to purchase a good online. However, the risks outweigh the potential benefits especially for products with characteristics and qualities that are difficult to be fully observed prior to the purchase, like furniture. For these product types, the perceived risk of using an online channel increases since a description of essential product attributes might not be available online. Thus, the increased risk of buying these product types often requires other platforms through which information can be obtained, like the human senses or customer services (Chocarro, Cortiñas & Villanueva, 2013). Accordingly, the assumption that segments containing predominantly members with higher levels of convenience orientation should prefer and select online channels, might be less strong or even disappear in the context of purchasing high involvement products.

### ***Service Orientation***

Channel preferences according to Kollmann, Kuckertz and Kayser (2012) are also influenced by a customer's service orientation. Since service is an element that greatly influences the shopping experience, especially in-store (Bäckström & Johansson, 2006), it has a high impact on consumers' shopping behaviors as well (Vasiliu et al. 2015). In this regard, the service element is a benefit within offline channels that most online channels cannot compete against nowadays with respect to flexible, personalized and emotional expert competencies (Kollmann, Kuckertz & Kayser, 2012). Angell et al (2012) state that customers who have a service oriented shopping attitude value personal services that include interactions with personnel in-store and other influencers. The need for interaction leads to perceptions of higher costs and risks within online channels, due to a lack of personal contact and a lack of perceived competence, which in turn is found to be related to the avoidance of technical devices (Fernandez-Sabiote & Roman, 2016). This can be explained by the decrease of perceived risks within offline channels, which finds its roots in the customer's evaluation of face-to-face communication as being more reliable and trustworthy (Polo & Sese, 2016). Accordingly, it can be assumed that service oriented consumers are more likely to favor

offline channels since they value personal and individualized service solutions. However, online channels allow more flexible access to services and information without any time-related and geographical restrictions (McGoldrick & Collins, 2007). Thus, this leads to the assumption that:

*Segments with preferences and selections of offline channels should contain more service oriented members. However, the convenience orientation among members might have a greater impact on the channel preference than the service orientation of a customer or vice versa.*

### **Risk Aversion**

The third factor discussed by Kollmann, Kuckertz and Kayser (2012) as being an important predictor in a consumers' channel preference is the personal attitude of avoiding risks. A risk-averse personality is characterized as being doubtful and uncertain regarding possible negative effects and consequences of a selected channel (Schröder & Zaharia, 2008). Within the context of multichannel retailing, the perception of risk is one of the most important factors leading consumers to avoid purchasing through an online channel (Kollmann, Kuckertz & Kayser, 2012). The perceived risks of using online channels are often related to the fact that consumers have to rely on illustrations and pre-selected information about the products, rather than observing the product themselves. In addition, the perceived risk could also be delivery-related if consumers are uncertain about factors like quality, completeness or delivery time of the order (Schröder & Zaharia, 2008). Since consumers are perceiving offline channels as being more familiar and less associated with risk (Polo & Sese, 2016), it can be assumed that:

*Segments that prefer and select offline channels contain more members with a higher level of risk aversion than the segments that prefer and select online channels when buying high involvement products.*

More specifically, Kollmann, Kuckertz and Kayser (2012) found that risk aversion has significant effects on the channel preference within the stage of purchase, whereas the effect of risk aversion cannot be supported in the context of the information search process. In addition, in the same study it could be shown that convenience is a more important factor in the intention of purchasing a product online than risk aversion. Thus, the effect of the risk aversion could be overshadowed by the convenience orientation of members when selecting online channels.

## **2.5 Theoretical Framework**

The aforementioned findings of the discussed literature lay the basis for the development of the theoretical framework, which is visualized in Figure 3. The theoretical framework acts as a guide for the following analysis and allows the underlying assumptions to be researched and tested. Furthermore, it builds on the model of multichannel segmentation, which is inspired by Konuş, Verhoef and Neslin (2008), and is amplified by profiling the established segments demographically and psychographically. Additionally, the adjusted multichannel segmentation is compared to the traditional demographic segmentation through selected



performance measurements. The entire theoretical framework is within the scope of high involvement products.

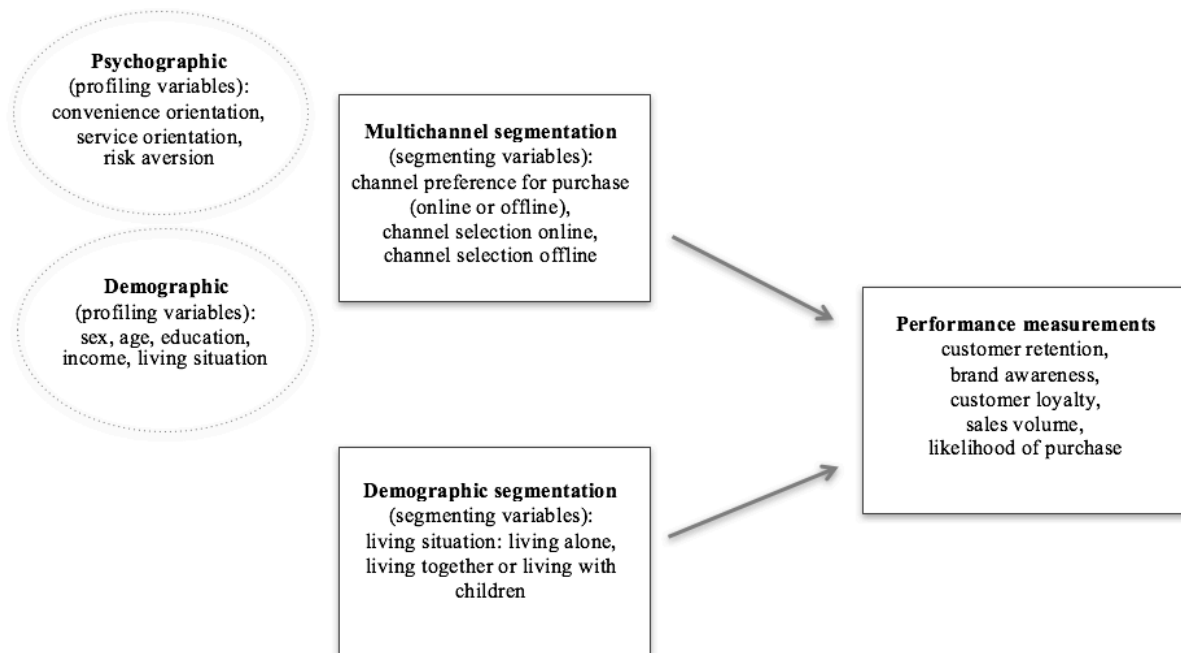


Figure 3: Theoretical framework

## 2.6 Chapter Summary

Regarding the multichannel segmentation, characteristics of the channels, the product and the consumers are found in previous literature to influence the channel preference and selection. Considering the characteristics of the channels, customers continuously evaluate the different attributes that are attached to the use of diverse channels when purchasing products (Keeney, 1999; Shih, 2004). On the one hand, offline channels have the advantage that they offer personal services, an immediate acquisition and that customers perceive them as more familiar and therefore less risky. However, purchasing a product in this channel is also very time-consuming and requires travel costs. Online channels, on the other hand, are convenient to use as they reduce the required efforts, travel and time costs, and customers can purchase products at any time they want. But online channels are also perceived as lacking personal services and being connected to a higher level of product and delivery related risks. The evaluation of these attributes by consumers represents the basis for the influence of the product and consumer characteristics on channel preferences and selections.

Looking at the product characteristics, the study at hand focuses on high involvement products only. In this context, the previous literature argues that high involvement products are more expensive, more complex and their purchase is less frequent, which influences the perceived risk of purchasing these products positively (Brunelle, 2009). Due to their specific product characteristics and their higher risk perception, the previous literature indicated that customers will mainly prefer and select offline channels for purchasing high involvement products and that these preferences should be quite strong, whereas they are less strong for

low involvement products. These assumptions are tightly connected with the characteristics of the offline channel, as being perceived as less risky and providing elements that additionally reduce the perceived risks, like personal services.

In addition, the characteristics of the consumers themselves were found in previous literature to influence the preferences and selections of channels. Various demographic variables such as a consumer's sex, age, education, income and living situation, as well as psychographic variables showed significant results in previous research. Regarding the latter ones, Kollmann, Kuckertz and Kayser (2012) established a framework consisting out of three psychographic variables that include a consumer's service orientation, convenience orientation and risk aversion. These variables were supported in their importance throughout the study of Kollmann, Kuckertz and Kayser (2012). In general, the demographic and psychographic characteristics of the consumer are found in several studies to influence a consumer's channel preferences for either online or offline channels. In this context, consumers should prefer and select online channels for purchasing high involvement products, when they are male, young, highly educated and convenience oriented, whereas female, older, less educated, risk averse and service oriented people are found to prefer offline channels.

### **3. Methodology**

In this section, the chosen methodology will be presented and it will begin with a discussion of the research strategy as well as the underlying epistemological and ontological philosophy of the research. Thereafter, a description of the research design will be presented, and is then followed by a description of how the data was collected and how the data analysis was performed. Lastly, the limitations of the chosen methodological approach will be discussed.

#### **3.1 The Philosophical Assumptions**

To enable a better understanding of the research at hand, there is a need to first understand its underlying philosophical assumptions. This research aims to understand a customer's multichannel consumer behavior by generating a segmentation model, which takes distinctive features of customers into consideration that tend to occur with their multichannel behavior. This affects the facts in the research to be concrete, but not directly measurable. Psychographic profiles, for example, are not directly accessible and measurable as one cannot directly ask about one's psychographic profile. Instead, they have to be measured in multiple items that together form the psychographic profile like pieces that have to be put together in a puzzle. This leads to the embedding of the research within an internal realistic perspective, as this ontology is generally assumed when the research is based on a survey that contains not directly measurable facts (Easterby-Smith, Thorpe & Jackson, 2015). However, as the research is comparing the multichannel segmentation model to the traditional demographic model, there is also an underlying assumption that heterogeneous customers can be divided according to more than only one method of segmentation. Hence, the research underlies a relativistic ontology to some extent as well, since it acknowledges more than one truth (Easterby-Smith, Thorpe & Jackson, 2015). Nevertheless, this research is leaning more towards an internal realistic ontology as it acknowledges that facts can be objectively measured, which is what we are aiming for in the study at hand, and thus it is separated from the relativistic perspective as a relativistic perspective denies objectivity (Guba & Lincoln, 1994) and claims that the reality is socially constructed (Bernstein, 1983).

In accordance with the internal realistic ontology, facts are concrete but cannot be accessed straightforwardly, which implies that the research also can be characterized as leaning towards an underlying positivistic epistemology. This positivist approach leads to the consideration of the social environment as tangible, external and objectively measurable (Comte, 1853), which enables the generation and comparison of segmentation models. Moreover, positivism generally aims to generalizing the findings and results (Easterby-Smith, Thorpe & Jackson, 2015), which is in line with the aims of the study at hand. However, one weakness of positivism is its associated lack of generating new theory as it is inflexible and reproduces existing theory mainly (Easterby-Smith, Thorpe & Jackson, 2015). To some extent this is also the case of the research at hand since it extends the existing knowledge by using established models, concepts and findings from previous research. Nevertheless, this research allows a new perspective regarding the segmentation models for companies that offer high involvement products. Another criticism towards studies with a positivistic epistemology is that the results and conclusions are risking to not generating explicit implications for future actions (Easterby-Smith, Thorpe & Jackson, 2015). In the case of this research, a comparison of the segmentation model and the demographic segmentation model indicates which one of the models most appropriately explains differences in selected performance measurements. Thus, it provides theoretical as well as managerial implications for future actions. These

results and conclusions are strategically valuable for retailers selling high involvement products and contribute to existing knowledge by giving strategic insights that future actions can be built upon.

### **3.2 Research Strategy**

The decision to choose a quantitative research strategy follows the logic of the research's philosophical position. A quantitative research strategy supports the internal realistic and positivistic assumptions as it enables to objectively measure customers' behavior, values and motivations (Hughes, 1990). Within the context of the research, facts are collected in a survey with a large sample size, which facilitates to the creation of and comparison of segmentation models. More specifically, it allows us to categorize and form segments based on the respondents' answers regarding their channel selection and preferences. In addition, it provides an opportunity to objectively compare the segments based on performance measurements, which limits subjective interpretations regarding which of the segmentation models is dividing customers most accurately. Therefore, in accordance with both quantitative research and positivism, there is a focus on obtaining findings that are objective and that can be used for generalizing them in future research (Bryman & Bell, 2013).

Moreover, the research has a primarily deductive approach to test the theoretical framework's variables and theories in an empirical context (Bryman & Bell, 2013). In this context, this research relates to established models from prior literature by adjusting the multichannel segmentation model of Konuş, Verhoef & Neslin (2008), yet it tests this model in reference to high involvement products. In addition, the research at hand incorporates demographic and psychographic covariates that have previously been shown to affect consumers' channel preferences and selections. The comparison of the segmentation models is based on customer retention, brand awareness, customer loyalty, sales volume and likelihood of purchase, which are well-established performance measurements (Bendoly, 2006; Keller, 2009; Neslin et al. 2006; Reinartz & Kumar, 2002). In terms of the traditional demographic segmentation variables, background information from the case company was obtained to select the variables accordingly to their current segmentation model. Thus, the research has a limited inductive approach as we used empirical data to select the traditional demographic segmentation variables (Bryman & Bell, 2013). However, as the intention of obtaining these variables is to test them by the theoretical framework towards an empirical context, we argue that the research approach is dominantly deductive.

### **3.3 Research Design**

The quantitative approach that arises from the underlying positivistic epistemology leads to a measurement of relevant customer data through a survey. Moreover, it enables to fulfill the purpose by generating and comparing the segmentation models as well as it provides a higher level of generalizability of the findings. Therefore, the study at hand can be characterized as a cross-sectional study as respondents are included in the survey only once (Burns & Burns, 2008). The survey allows this research to investigate multiple variables at the same time (Easterby-Smith, Thorpe & Jackson, 2015), which is crucial to perform a cluster analysis and thus to form the segments. In addition, it enables us to capture relevant demographics variables, psychographics variables and performance measurements that are used for characterizing the segments as well as to compare the different segmentation models.

Moreover, a cross-sectional study is characterized by a large sample size, which allows a higher generalizability of the findings (Easterby-Smith, Thorpe & Jackson, 2015).

More specifically, the research and the survey investigate the theoretical framework in the context of a single-case study of IKEA Sweden and its customers. Specifically, the survey covers the entire Swedish market of the case company, which is essential to enable a comparison of the demographic differences between the segments in the established segmentation model. The case company IKEA Sweden is the world's largest furniture retailer (statista, 2017), one of Sweden's largest companies (Veckans Affärer, 2016) and was considered valuable for this research for three primary reasons. The first reason is based on the fact that their product categories include furniture, which allows to establish a multichannel segmentation model for high involvement products. Second, IKEA merchandises its products through online and offline channels, which allows to study customer's multichannel behavior. Third, the company is currently and historically using demographic variables for segmenting customers (Sanna Cronqvist & Peter Nilsson, personal communication, 21 February 2017), which enables a comparison to the multichannel segmentation concept. Additionally, the notion that IKEA Sweden possesses a rich database of customer insights is also considered valuable for the research at hand, as it increases the external validity of the research.

### **3.4 Sampling and Data Collection**

In terms of the data collection, several collection methods were compared to find the one that most appropriately met the purpose, philosophical assumptions, research design and strategy. The data collection method was required to enable or include a large sample that captures the desired characteristics of the company's customers. In this context, Inter IKEA, on behalf of IKEA Sweden, provided secondary data that adhered to the requirements. In general, secondary data is frequently used in surveys and case studies within the field of business and management research (Saunders, Lewis & Thornhill, 2009). In this research, the secondary data consisted of a data set that was generated using two surveys that investigate IKEA's brand capital on an international, country and market level twice a year.

To ensure that the secondary data is of high quality, the data set was evaluated in five steps based on specific requirements (Malhotra, 2010). First, the original data collection should be assessed and evaluated (Malhotra, 2010), which was done by interacting with the ones that are responsible for market intelligence at IKEA Sweden, and therefore responsible for conducting data, as well as by evaluating the data collection procedure that was provided by the data collectors. The data was collected from GfK using online panels in two waves each half-year, which included two distinct questionnaires that each took 15 to 20 minutes to complete. More specifically, first the respondents were invited for the market level survey, which included questions regarding demographics, channel usage and brand awareness. Two weeks afterwards, the same respondents were asked to complete the country level survey, which included questions regarding customers' values and attitudes. In the data set, which was used in the present study, the two surveys were merged, which was possible since the surveys included the same respondents. Moreover, the present research focused on Sweden and the periods of autumn 2015 and spring 2016 only.

In total, the sample size consisted of 6,044 respondents, with 3,033 respondents from autumn 2015 and 3,011 respondents from spring 2016. These respondents were interviewed in the

entirety of Sweden. Moreover, the sampling method used for the surveys was based on quota sampling, which included quotas on sex, age and the market. In general, the aim of utilizing quota sampling is to obtain a sample that is representative of the population in certain aspects (Bryman & Bell, 2013; Moser, 1952). In the case of the market survey, quota sampling was used to enable a sample that was relatively demonstrative of the demographical characteristics of the IKEA customers. More specifically, the quotas were based on demographic categories such as sex, age (15-24 years; 25-34 years; 35-44 years; 45-54 years; 55-70 years) and the respondent's geographical location. For the country level survey, the same respondents were invited and, since the respondents' rate was lower in the second survey, there was a need to adjust for non-response. The adjustment for non-response was done by excluding the affected cases. However, a systematic refusal of the second survey could not be observed.

Second, the secondary data should be evaluated based on its accurateness and potential errors, which is generally a challenge when another party collects it (Malhotra, 2010). Similar to the first requirement, the accuracy was ensured by having an open dialog with IKEA Sweden to understand possible limitations of the data. In addition, the results were compared with previous research within multichannel segmentation and multichannel behavior, which enabled us to discover if the result differed remarkably from previous findings.

Third, the data needs to be relatively recently collected to increase the possibility that the findings are of relevance (Malhotra, 2010). The data was collected in autumn 2015 and spring 2016, which makes it possible to assume that the findings are still valid.

Fourth, the data should be assessed based on its original purpose and objectives, which might affect the way of how it can be interpreted in another context (Malhotra, 2010). As previously mentioned, the data was collected twice a year with the purpose to investigate IKEA's brand capital. However, the actual questionnaires also consisted of numerous other statistics that included a customer's channel preference, income level and brand loyalty, for example (see Appendix B). Based on the previous arguments, we argue that although the original purpose does not align with the aims of this research, the data was still highly appropriate to use as it covered essential variables for generating a multichannel segmentation model, to profile segments with demographic and psychographic variables as well as to construct the demographic segmentation and compare both with well-known performance measurements.

Finally, the dependability of the data should be evaluated based on its trustworthiness, credibility and reliability (Malhotra, 2010). Since the secondary data that was used in the study was originally collected as an original source by GfK, which is the responsible data collector and a well-known company for doing market research, it reduced some of the risks for errors and enabled a more explicit understanding of the used methodology. Moreover, GfK is an internationally established firm that focuses on market analysis and consumer intelligence, which implied that the data collection process and the source of the data in general was trustworthy.

Based on these five criteria, the quality of the data was affected positively by the large sample size, the recentness of data collection, the appropriateness of the variables for the aspired data analysis as well as the trustworthiness of the original data collector. Nevertheless, the fact that it was secondary data implies that we could not control the quality of some of the criteria, which included that the data originally had a different purpose and did not utilize probability sampling. Despite these flaws, the fact that we had an open dialog with IKEA and access to a rich description of the methodology in addition to the previously discussed criteria, the

secondary data was considered to be of a high quality and appropriate for the purpose of the research.

### **3.5 Measurements**

To enable a successful analysis, variables and measurements from the provided data set were selected based on their fulfillment of the purpose and specific aims of the research. A table with all selected variables from the original questionnaire can be found in Appendix A. Notably, the authors translated the questions, variables and answers from Swedish into English.

To enable an establishment of a multichannel segmentation concept for high involvement products, which is an advancement of the research of Konuş, Verhoef and Neslin (2008), the variables for the cluster analysis needed to be similar to the previous study and thus explain a customer's channel preferences and selections. Based on this, three variables were selected: *online/offline channel preference, offline channel selection and online channel selection*. All of these were measured with regards to the purchase of furniture. These were used as both clustering variables to obtain the multichannel segments and independent variables in the discriminant analysis to generate names according to their contributions to the segments, which in turn were used as dependent variables in the measurement. Prior to the analysis, the channel preference and the channel selection were z-standardized to enable the comparison of the variables as they were measured in different scales (Malhotra, 2010). These standardized variables were then used in the following analysis.

Moreover, to profile and thus allow for a more holistic description of the customers' multichannel behavior within each segment, demographic and psychographic variables were selected based on their relevance of channel selection and preference in the previous literature. In total, five demographic variables were selected which included age, sex, education, living situation and income. Income, education, age and living situation were based on categories, which are presented in Appendix A. The variable of the respondent's sex included the common categories male and female. Similarly to Kollmann's, Kuckertz' and Kayser's (2012) findings, the psychographic variables were focusing on service orientation, convenience orientation and risk aversion. However, since there was no opportunity to construct the questionnaire with similar variables to the previous literature, we instead focused on finding the variables that were as comparable as possible. In total, ten psychographic variables were selected and then reduced to six variables by using Chronbach's Alpha, which then represented the psychographic variables of interest. In this context, the convenience orientation was constructed from a respondent's perception of the online shop, store and overall shopping experience as being convenient. This was complemented by a variable that measured a respondent's concerns about using the online shop, which was labelled online discomfort. The risk aversion was divided into products and the delivery, and included two variables that measured a respondent's concern about the product quality and the delivery of products. This was complemented by a respondent's level of trust in the company, which was believed to have a negative relationship to the respondent's risk aversion. Accordingly, the higher the levels of trust, the lower the risk aversion and vice versa. Lastly, the service orientation is represented by a variable that measures a respondent's concerns about services. All in all, as the questionnaire did not include questions that directly measure a respondent's convenience orientation, service orientation and risk aversion, variables were selected that measured a respondent's concerns with these aspects. This was

based on the assumption that concerns simultaneously display that respondents find certain aspects important, as they would not show concerns otherwise. However, this ignored people that are totally satisfied with these aspects and therefore did not show any concerns.

Lastly, to allow for a comparison of the multichannel segmentation model with the traditional demographic segmentation model, a customer’s living situation was selected that IKEA Sweden traditionally uses for segmenting their customers. In the survey, two variables explained the current and historical living situation regarding if people live alone or together, as well as if people are living together with children or not. Thus, these two variables were combined to generate a new variable. To enable the actual comparison of the segmentation models, variables were selected from the survey based on their relevance within marketing literature and regarding the fact if they met the assumptions of an analysis of variance (ANOVA). The selected independent variables included the *customer retention*, *brand awareness*, *customer loyalty*, *sales volume* and *likelihood of purchase*. These variables all met the assumptions that are needed to perform an ANOVA. In ANOVA, in the comparison of the segmentation models, the segments of each segmentation model were treated as dependent variables. For instance, *living alone* which is one of the segments within IKEA Sweden’s segmentation model was treated as one of the dependent variables, whereas the performance measurement *customer loyalty* represented the independent variable. In the upcoming section, the data analysis process of generating the multichannel segmentation with the demographic and psychographic profiles will be further described, as well as the process of comparing the segmentation models.

### 3.6 Data Analysis

The data analysis section is divided into three sections that each include various steps, which are visualized in Figure 4. These sections are the establishment of the adjusted multichannel segmentation model, the profiling of the segments and the comparison of the segmentation models.

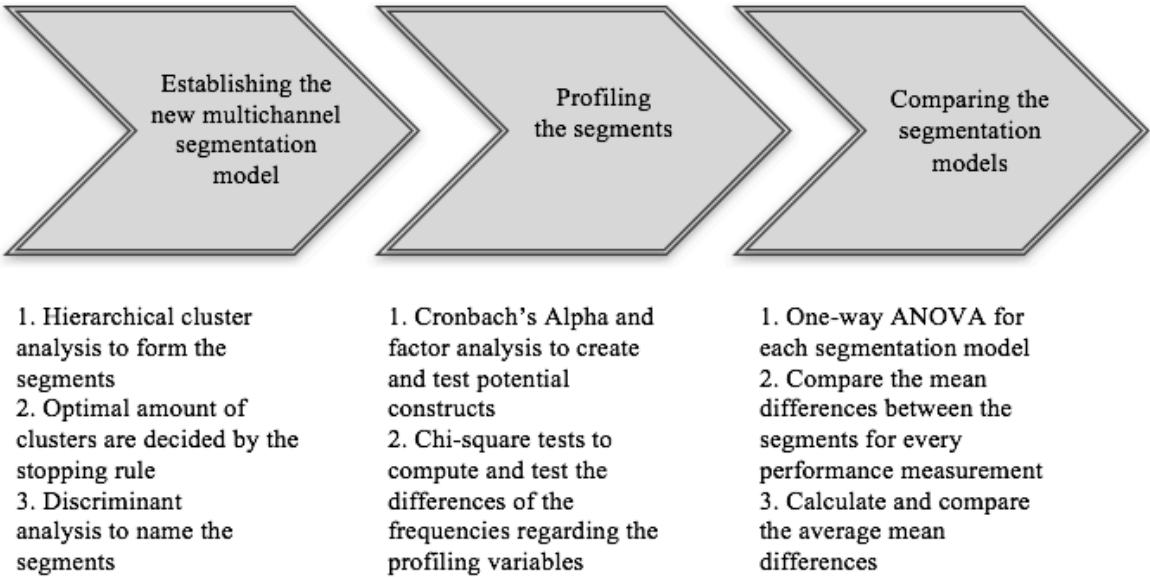


Figure 4: The data analysis procedure



### **3.6.1 The Multichannel Segmentation Model for High Involvement Products**

To generate the multichannel segmentation model, the procedure was inspired by Jansson's, Marrel's and Nordlund's (2009) research process that constructed segments based on customers' relation to environmental purchase and behavior. First, respondents were clustered into homogeneous groups according to their channel preference and channel selection by performing a cluster analysis that followed an agglomerative hierarchical procedure with Wards linkage and squared Euclidean distance. In general, a cluster analysis is typically used within marketing for segmentation purposes (Malhotra, 2010), as it organizes and categorizes individuals into homogenous groups while maximizing the heterogeneity between the groups (Yim & Ramdeem, 2015). In the case of this research, it enabled to segment the diverse customers into groups with similar preferences and selections of channels. The hierarchical cluster analysis, as used in this study, compares the means between every respondent and clusters the respondents with the lowest difference together in sequential steps, which decreases the amount of clusters from step to step (Blei & Lafferty, 2009). In contrast, non-hierarchical clustering techniques have defined amounts of clusters, where every respondent gets assigned to the cluster that best represents him or her (Morissette & Chartier, 2013). Given the nature of the research, the hierarchical cluster analysis was preferred as there was no desired amount of clusters prior the analysis. Moreover, the Ward's method in turn was selected as it establishes clusters that are of comparable sizes and shapes. More specifically, small groups tend to be merged together as Ward's method is aiming for the generation of homogeneous sum of squares that are related to the amount of respondents within a group (Hair, Anderson, Babin & Black, 2010). Furthermore, when using the Ward's clustering method it is further recommended to utilize the squared Euclidean distance (Hair et al. 2010), which is the most frequently used distance measure (Blei & Lafferty, 2009).

Next, the optimal amount of segments, which are represented by clusters, was determined by using the stopping rule of Hair et al (2010) that is based on the percentage change of heterogeneity, which in turn explains how different the clusters are from each other. As the aim of the cluster analysis is to increase the homogeneity within the clusters, the point was identified where the heterogeneity within the groups increased drastically. Therefore, differences between the heterogeneity coefficients were calculated for every clustering step and in this context, a large difference indicated that the combination of clusters increased the dissimilarity within the groups and that the clustering procedure should be stopped at that point (Yim & Ramdeem, 2015).

Lastly, to give names to the clusters there was a need to identify the contribution of all underlying variables to the segments by running a discriminant analysis (Jansson, Marrel & Nordlund, 2009). Thus, the names were given based on the underlying contributions of the following clustering variables: online/offline channel preference, offline channel selection and online channel selection. Moreover, the discriminant analysis also enabled to test the difference between the segments (Jansson, Marrel & Nordlund, 2009), which indicated if the segments were significantly different on a 0,05 level.

### **3.6.2 Profiling the Segments**

To be able to profile respondents according to their segments, some variables were tested regarding their reliability by using Cronbach's Alpha to generate similar psychographic constructs. The constructs that exceeded the recommended value of 0,6 were used in the following analysis. In addition, to further support the usage of the constructs, a factor analysis

using the varimax method was run. The psychographic constructs that were not supported were treated as single items, as well as all demographic variables. After the clusters were identified and the psychographic variables and demographic variables were prepared, the clusters were profiled by using chi-square tests. Thereby, frequencies were calculated and tested regarding their significance to show if the groups are differently regarding the tested demographic and psychographic variables. This allowed to identify characteristics of members belonging to different clusters and also to predict the cluster membership of other people based on their psychographic and demographic characteristics (Hair et al. 2010).

### **3.6.3 Comparison of the Segmentation Models**

The comparison of the segmentation models was done in two steps, which first focused on extracting the demographic variables for the traditional segmentation model and second compared differences of well-known performances measurements between the segments of both segmentation models.

The demographic variables that are traditionally used by the case company to segment its customers were selected from the data set. IKEA Sweden traditionally segments their customers based on the demographic variable *living situation*, which describes if the customers are living alone, together with someone or together with children. The latter segment is sometimes additionally segmented by IKEA into the diverse age categories of the children, yet in this research we did not distinguish between the age of the children and looked at the segment *living with children* as a whole instead.

In a second step, the segmentation models were compared through performing two separate one-way ANOVAs. The comparison of the models was based on the average values of selected performance measurements, also referred to as means. More specifically, the different segments within both models were used as dependent variables and thus represented the different groups in the ANOVA (Malhotra, 2010). To illustrate an example, the demographic segmentation included three groups that were based on the three different living situations. These groups were then tested towards the occurrence of differences in means within the independent variables, which in turn were the performance measurements such as the customer loyalty. These one-way ANOVAs were performed separately for both of the segmentation models. Thereafter, the differences between the mean values of every segment were calculated and the average difference were computed. This allowed us to compare both segmentation models in the ANOVA. If the mean differences between the groups within one segmentation model tended to be larger on average than the mean differences between the groups within the other segmentation model, then this indicated that the division was clearer and explained differences regarding the performance measurements better.

## **3.7 Potential Limitations and Weaknesses**

In consideration of the selected research design, the external validity is one potential weakness that has to be considered. Since the research is considered to have a cross-sectional research design within the frame of a case study, it implies that the findings in the research are mostly relevant for the investigated case. In the context, looking at one case only implies that some limitations exist to directly generalize the findings to all high involvement products. Thus, the frame of having a case research design effects the external validity and thus if the conclusions from the research are generally valid and generalizable (Bryman & Bell, 2013) as

the findings of one case can be very specific and valid to the case only. However, Stake (2006) argues that repetitive case studies that are similar to the research at hand can be used for generating findings that can be generalized carefully in a broader sense. This will be further discussed in limitations and future research (see chapter 5).

Based on the criteria of Malhotra (2010) for evaluating secondary data, it becomes clear that there are also some potential weaknesses that are linked with using secondary data. This form of data influences the reliability of the study, in terms of that there is a probability that biases or random events have affected the research and thus if there is a chance to get the same results if the study was performed again (Bryman & Bell, 2013). More specifically, the evaluation implies that the quality of the data cannot be controlled in terms of potential errors and the formulations in the questionnaire, so that measurements were not totally appropriate and effects like interviewer effects or the social desirability could have influenced the data. However, we argue that the quality and internal reliability of the measurements as well as the data collection have been assured. This is based on the fact that we had an open dialog with IKEA, an established market analysis firm collected the data and, lastly, because we had access to a document that in detail described the methodology of the data collection.

In addition, the sampling technique for collecting the data is based on non-probability sampling rather than on probability sampling, and only focuses on the customers of the case company. Hence, not all the subjects of the population had a calculable or non-zero chance of being included in the study, which negatively affects the reliability and external validity of the research (Malhotra, 2010). In this context, there are limitations of generalizing the findings directly to the whole target population as in all customers of IKEA Sweden. However, given the large sample size and the control for demographic variables, which are quite representative of the Swedish population, as well as considering the high market penetration of IKEA in Sweden, the findings could be still considered as being relevant for the Swedish society, other companies and research.

As previously mentioned, there was a very limited possibility to choose which measurements to include and which main constructs and variables to choose that are also found in previous literature. Therefore, choosing which of the variables to use from the survey was one of the most crucial aspects to be able to meet the purpose of the research. Thereby, the variables were compared and selected based on previous literature and tested regarding their accordance with the assumptions of the analyses. However, as the data was collected for another purpose, main constructs that were found in previous literature could not directly be extracted, leading to the fact that similar questions and constructs were used that were mainly based on specific concerns about conveniences, risks and services. These were assumed to be indicative of the individual's risk aversion, convenience orientation and service orientation, leading to the consequence of excluding persons that not stated any concerns although they might possess these orientations as well. This also affects the reliability and validity of the study negatively. However, based on the cost and time frame of the research, the advantages of using secondary data and established measurements, like a large sample size, outweigh the disadvantages.

### **3.8 Chapter Summary**

The research is embedded in an internal realistic ontology, as this ontology is generally assumed when a research is based on a survey that contains facts or truths that are not directly

measurable. In line with the internal realism and as there is a focus on objectively obtaining findings that can be generalized in future research, the research is leaning towards a positivistic epistemology. Thereby, the facts are collected in a survey with a large sample size, which facilitates the creation and comparison of the segmentation models, both quantitatively and objectively. The theoretical framework and the assumptions, which are based on previous literature, are tested in an empirical context, and therefore the research is considered to have a deductive approach.

Given these points and the fact that the empirical data was gathered through a large survey, the research is characterized as having a cross-sectional design that investigates the theoretical framework in the context of a single-case study of IKEA Sweden and its customers. The data was collected through accessing the secondary data, which was evaluated based on five criteria that concluded that it was of a high quality and appropriate for meeting the purpose of the research. To enable a successful analysis, variables and measurements from the provided data set were selected based on their fulfillment of the purpose and specific aims of the research. The data analysis was divided into three main parts, which included the establishment of a multichannel segmentation model, the profiling of the segments and the comparison of the segmentation model, which each contained different statistical approaches. Lastly, the potential limitations and weaknesses are evaluated to be primary an effect of using secondary data from a single-case, which can affect the reliability and validity of the research. To ensure reliability and validity, we have maintained a critical mindset towards the data set as well as an open dialog has been held with the case company throughout performing the data analysis.

## 4. Results and Analysis

The following section will present and discuss the results of various performed methods to first establish a multichannel segmentation model for high involvement products, second to profile the segments and third to compare the adjusted model with the traditional demographic segmentation. As mentioned in the methodology, the approach of the data analysis is conducted along the lines of Jansson, Marell and Nordlund (2009) and will focus on customers and channels of IKEA Sweden. Notably, the channels of IKEA Sweden are divided into the offline channel, which represents the IKEA stores, and online channels, which include both the online shop and mobile website. Moreover, to establish a multichannel segmentation model for high involvement products, the results refer to furniture as belonging to the category of high involvement products.

### 4.1 The Multichannel Segmentation Model for High Involvement Products

In order to generate a segmentation model that is based on customers' multichannel behavior for high involvement products, a cluster analysis was performed that follows an agglomerative hierarchical procedure with Wards linkage and squared Euclidean distance. The cluster analysis was based on the three variables: *online/offline channel preference*, *offline channel selection* and *online channel selection*. Following the stopping rule of Hair et al (2010), the division of all respondents into four clusters was the most meaningful clustering solution as the percentage change of heterogeneity starts to increase drastically for solutions with less than four clusters (see Table 2). The four clusters of the segmentation model cover 3,912 out of 5,700 respondents, which equals a classification rate of 68,6%. The classification rate is quite low at first sight, since only 4,350 respondents answered the question when they last purchased furniture online within the last twelve months. In the multichannel segmentation model, the first cluster contains 1,753 respondents (44,8%), the second cluster contains 372 respondents (9,5%), the third cluster contains 1,301 respondents (33,3%) and the fourth cluster contains 486 respondents (12,4%). In the upcoming section, these four clusters will be further described and labelled in accordance to the segment that they will represent in the multichannel segmentation model.

*Table 2: Percentage change in heterogeneity regarding the clustering solutions*

Cluster No.	Coefficient	Percentage Change in Heterogeneity for the next clustering solution
7	2200,013	15%
6	2521,985	13%
5	2850,569	17%
4	3347,381	67%
3	5602,814	54%
2	8648,27	43%
1	12396	

In the next step, a discriminant analysis was run to identify the contribution of all underlying variables and to test if the clusters show significant differences, which also was the basis for naming the clusters. Therefore, the 4-cluster solution from the cluster analysis above was used as the dependent variable in the discriminant analysis, whereas the three variables *online/offline channel preference*, *offline channel selection* and *online channel selection* were used as independent variables.

The names of the different clusters got selected that most appropriately describe the multichannel behavior of the members of each cluster, which are based on the mean values of the three clustering variables regarding the four clusters. The names of the four clusters are as follows: *uninvolved offliners*, *ambiguous onliners*, *strict offliners* and *ambiguous offliners* (see Figure 5).

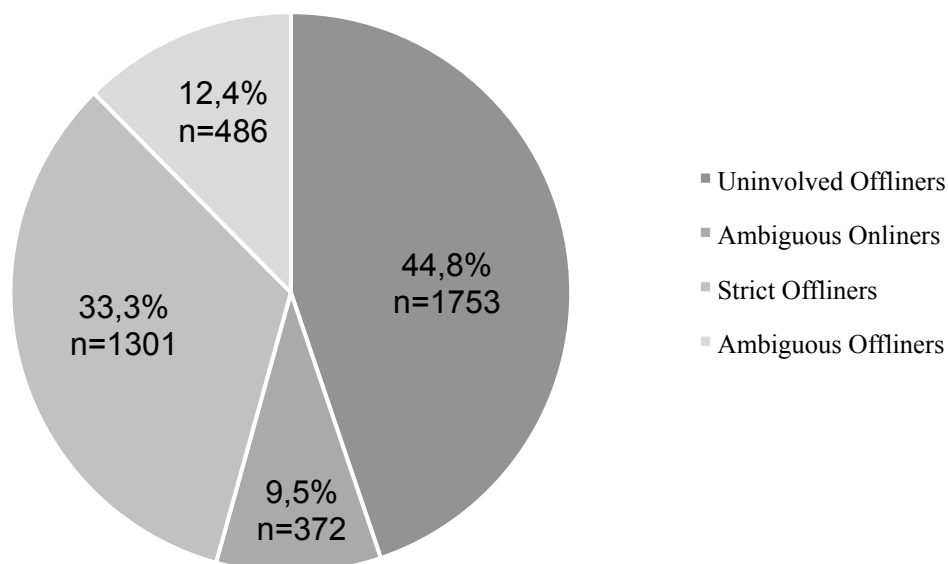


Figure 5: Distribution of the segments

Members of the first segment are called *uninvolved offliners* since they have a clear preference for buying furniture offline and also show a consistent behavior in that they have never purchased furniture online ( $M = 1,31$ ). However, in reference to their actual channel selection, their last purchase in-store is already two to five years ago ( $M = 2,88$ ), so their multichannel behavior might have changed through the years. With 1,753 members, the uninvolved offliners represent the biggest segment.

The second segment consists of customers who do not show a preference for purchasing furniture offline or online ( $M = 2,36$ ), but rather they tend to slightly prefer online channels for purchasing furniture and are therefore called *ambiguous onliners*. Adhering to their vaguer channel preference, ambiguous onliners purchase furniture in-store as well as online. Contrary to the fact that their channel preference is slightly more directed towards online channels, they do not show a consistent purchasing behavior as they bought furniture in-store ( $M = 4,13$ ).

more recently than online ( $M = 2,81$ ). With 372 members, the ambiguous onlineers are the smallest segment.

The third segment is called *strict offliners* as they show a strong preference for purchasing furniture offline ( $M = 1$ ) and, in comparison to the other segments that favor offline channels, strict offliners show the most consistent behavior to their stated multichannel preference. The latter finding is based on the fact that they purchased furniture recently in-store ( $M = 6,32$ ) and they have the strongest negation of purchasing furniture online ( $M = 1,1$ ). As such, 1301 members can be categorized as being strict offliners and are thus the second largest segment.

Lastly, respondents that fall into the fourth segment can also be characterized as having a clear preference for purchasing furniture offline ( $M = 1$ ). However, their actual purchasing behavior reveals that they purchase furniture both online and offline. These contradictions indicate that the relationship between their stated preference and their actual behavior is more inconsistent in comparison to the uninvolved offliners and the strict offliners, who have never purchased online. Thus, the fourth segment is called *ambiguous offliners*. Notably, ambiguous offliners are more consistent in their preference than ambiguous onlineers as they purchased furniture in-store ( $M = 4,51$ ) more recently than online ( $M = 1,93$ ). This might be ascribed to the fact that ambiguous offliners also show a stronger preference for offline channels than ambiguous onlineers for online channels. With 486 members, the ambiguous offliners represent the third biggest segment.

In general, the results of the discriminant analysis reveal a clear split of the segments regarding their stated channel preference for purchasing high involvement products like furniture, with three segments showing a strong preference for offline channels and only one segment showing a slightly stronger preference for online channels. Regarding the actual channel selection for purchasing the high involvement products, the segments are also characterized by having clear differences regarding the time they last purchased high involvement products online or offline. Moreover, the segments with preferences for offline channels show different levels of consistency in the relationship between their stated preference and their actual buying behavior, with strict offliners being the most consistent, followed by the uninvolved offliners and lastly the ambiguous offliners. The differences between the segments are visualized in Figure 6.

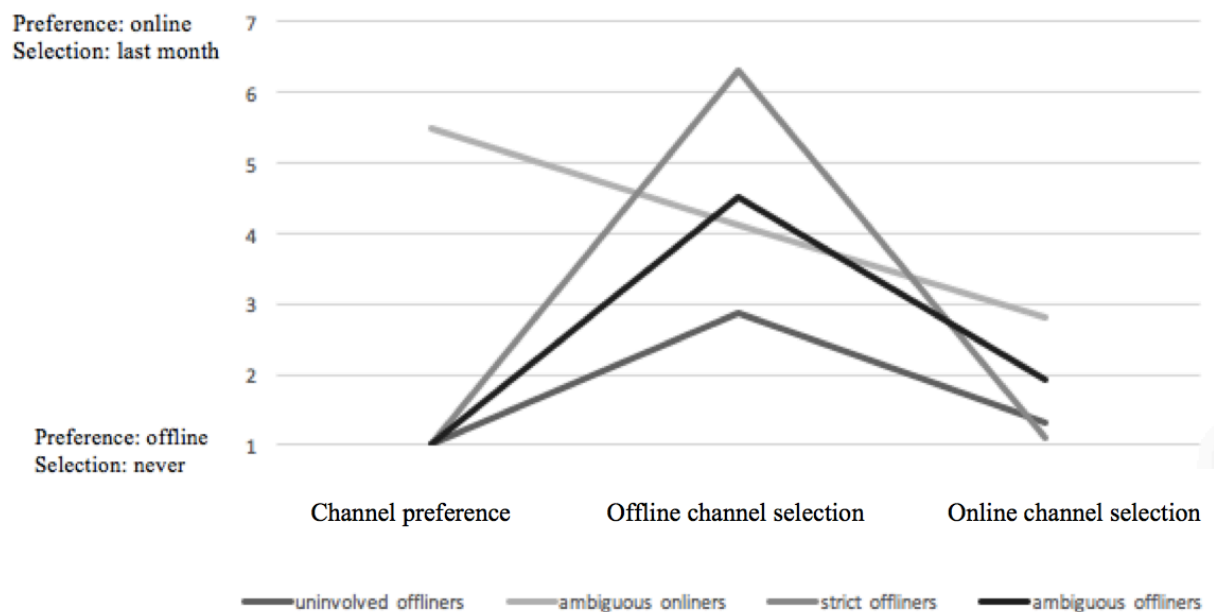


Figure 6: The differences between the segments

Comparing the result to previous multichannel segmentation models for product categories (Konus, Verhoef & Neslin, 2008) and industries (de Keyser, Schepers & Konuş, 2015; Sands et al. 2016), the segments in this study only support some of the previous findings. More specifically, Konuş, Verhoef & Neslin's (2008) multichannel segmentation model consisted out of three segments: the multichannel enthusiasts, the uninvolved shoppers and the store-focused customers. This research identifies that both the ambiguous onliners and the ambiguous offliners show a multichannel purchasing behavior, which is similar to established segments in the studies by Sands et al. (2016) and Konuş, Verhoef and Neslin (2008) as they select online and offline channels. However, looking at the channel preference, Konuş, Verhoef and Neslin (2008) found only one segment preferring offline channels, whereas the results of the present study show that three out of four segments show clear offline preferences. This finding ties in with findings of Brunelle (2009), who argues that customers that purchase high involvement products are more likely to prefer offline channels. In this context, only ambiguous onliners, which members represent the smallest cluster with a rate of 12,4% of all customers, show a tendency to slightly prefer online channels for purchasing furniture. All other segments, which make up to a rate of 87,6%, show strong preferences for offline channels only. Thus, it is possible to argue that the high product involvement is making the respondents to lean more towards preferring and selecting offline channels. Based on the provided findings, the following assumption is supported:

*Customers will favor offline channels for purchasing high involvement products.*

The difference might be attributed to the analyzed product as being a high involvement product, which is found to require more elements in its purchase that can typically be ascribed to offline channels, like a greater need for services and risk reduction (Polo & Sese, 2016).

Moreover, the findings that the strict offliners, ambiguous offliners and uninvolved offliners show a clear preference for purchasing high involvement products offline, tie in with Brunelle (2009) who argues that a high level of product involvement leads to stronger channel preferences, while the finding that the ambiguous onliners do not have a clear preference for



any of the channels contradicts the research of Brunelle (2009). However, the ambiguous onlineers are the smallest segment that only makes up a rate of 9,5% of the total respondents, which implies that a clear majority of the respondents is showing strong preferences for only one channel. Thus, the presence of strong channel preferences for high involvement products leads to a reversal of the findings of Konuş, Verhoef and Neslin (2008) that argue that a lack of product involvement leads to the absence of channel preferences. Thus, the following assumption can be supported:

*In terms of purchasing high involvement products, customers show strong channel preferences.*

Even though all of the previously stated assumptions are supported, the finding that the channel selection of customers for the actual purchase was not as clear as their stated preferences necessitates further discussion. Only the uninvolved offlineers and strict offlineers have clear preferences for selecting the offline channel. The remaining segments purchase products both offline and online. Based on the given findings that the ambiguous onlineers and ambiguous offlineers were unclear in their channel preference and actual channel selection, it is apparent that some of the respondents are not choosing to buy from channels that they actually prefer. This inconsistency in the relationship between stated preferences and actual channel selections will be further discussed in the following section.

## **4.2 Profiling the Segments**

A chi-square test was performed to describe and analyze customers' demographic and psychographic profiles according to their channel preference and channel selection for high involvement products, which represents the second aim of the research.

Prior the chi-square test, the underlying psychographic constructs were revealed by using Chronbach's Alpha values. For all psychographic variables that were extracted from the survey the Chronbach's Alpha was calculated. The results indicated that two constructs could be utilized: *convenience orientation* and *level of trust regarding IKEA*. The Chronbach's Alpha values of 0,864 for the convenience orientation and 0,642 for the level of trust regarding IKEA both surpassed the recommended value of 0,6 and support the reliability of those two constructs. By running a factor analysis using the varimax method, further support was gained for the existence of these two constructs. The other constructs *service orientation*, *risk aversion* and *online aversion*, could were not supported and were therefore used as single items in the analysis. The demographic variables were treated as single items since these are clearly in line with variables of the previous literature.

In a second step, a chi-square test was run to construct the demographic and psychographic profiles of the segments as well as to test differences between the segments. Hence, the results of the chi-square test provide the basis for the holistic description of each segment within the established multichannel segmentation concept. The results, which are presented in more detail in Table 3, show that the groups are significantly different in age, income, education, convenience orientation and online aversion at a significance level of 0,05, whereas sex, level of trust, service orientation and risk aversion regarding products and delivery did not show significant differences. However, service orientation only slightly surpassed the significance level, which is the reason why this psychographic characteristic will still be analyzed on the level of the individual segments.

*Table 3: Summary statistics of the profiling variables*

Variable	Levels	Uninvolved Offliners	Ambiguous Onliners	Strict Offliners	Ambiguous Onliners	Overall	Sig.
<b>Demographics:</b>							
Sex	Female	53,3%	50,5%	52,8%	50%	52,5%	n.s.
	Male	46,7%	49,5%	47,2%	50%	47,5%	
Age	15-19	3,4%	4,3%	3,3%	6,6%	3,9%	0,000
	20-24	8,6%	13,2%	14,4%	16,3%	11,9%	
	25-29	9,5%	12,9%	12,2%	9,7%	10,7%	
	30-34	9,4%	11,6%	10%	10,7%	10%	
	35-39	6,9%	8,1%	7,6%	7,4%	7,3%	
	40-44	9,6%	16,4%	10,5%	9,7%	10,6%	
	45-49	12,1%	9,1%	12,4%	13,2%	12,1%	
	50-54	10,3%	6,5%	6,9%	6%	8,3%	
	55-59	10,5%	7,5%	6,9%	6,2%	8,5%	
	60-64	9,1%	4%	9,2%	6,6%	8,3%	
	65-69	5,6%	2,4%	3,7%	5,6%	4,7%	
70-74	4,1%	3,2%	2,5%	1,9%	3,2%		
75-80	0,9%	0,8%	0,5%	0,2%	0,7%		
Living Situation	Living single	45,8%	48,5%	31,3%	32,4%	39,6%	0,000
	Living together	34,7%	27,2%	35%	34,5%	34%	
	With children	19,5%	24,3%	33,7%	33,1%	26,4%	
Income	Low	34,9%	38,4%	24,8%	34%	31,8%	0,000
	Medium	37,6%	27,1%	35,5%	31,5%	36,1%	
	High	27,5%	24,5%	39,8%	34,5%	32,1%	
Education	Primary School	8,4%	9,9%	6,3%	6,7%	7,6%	0,009
	Secondary School	49,3%	40,8%	49,9%	51,5%	49%	
	University/College	42,3%	49,3%	43,8%	41,9%	43,4%	
<b>Psychographics:</b>							
Convenience Orientation	Completely agree	38,4%	40,9%	45,7%	52,2%	43,4%	0,000
	Somewhat agree	44%	35,8%	46,1%	42%	43,1%	
	Equal	9,2%	10,2%	5,9%	2%	7,1%	
	Somewhat disagree	7,5%	12,8%	2,1%	2,8%	5,9%	
	Completely disagree	0,8%	0,4%	0,2%	1%	0,6%	
Level of Trust	Low	96,4%	96,8%	95,8%	95,3%	96,1%	n.s.
	Medium	3,4%	3,2%	3,6%	4,3%	3,6%	
	High	0,2%	0%	0,5%	0,4%	0,3%	
Service Orientation	Yes	4,1%	4%	4,9%	7%	4,7%	n.s.
	No	95,9%	96%	95,1%	93%	95,3%	
Risk Aversion - Delivery	Yes	18,3%	21,8%	16,9%	19,5%	18,3%	n.s.
	No	81,7%	78,2%	83,1%	80,5%	81,7%	
Risk Aversion - Product	Yes	28,6%	27,2%	31,5%	28,6%	29,4%	n.s.
	No	71,4%	72,8%	68,5%	71,4%	70,6%	
Online Discomfort	Yes	3,4%	6,7%	4%	5,6%	4,2%	0,01
	No	96,6%	93,3%	96%	94,4%	95,8%	

#### **4.2.1 Uninvolved Offliners**

Uninvolved offliners have a clear preference for buying furniture offline and also show a consistent behavior in terms of that they never purchased furniture online. They can be further described as being very evenly distributed in age, although they are more likely to belong to Generation X, while members tend to be the oldest in comparison to other segments with a median value of 45 to 49 years. Further, they are more likely to live alone (45,8%), to have a secondary school degree (49,3%) and to earn a medium salary (37,6%). Members are also less concerned about conveniences (8,3%), less concerned about services (4,1%) and have the lowest aversion towards buying furniture online (3,4%), even though they never buy online. Uninvolved offliners also show a strong preference for purchasing furniture in-store and their actual multichannel behavior is consistent to their stated preference as they only shop in-store. However, it has been two to five years ago since the uninvolved offliners purchased a good last time, which might lead to inconsistencies regarding the actual behavior in future purchases as the purchasing behavior might have changed since two to five years ago.

#### **4.2.2 Ambiguous Onliners**

Ambiguous onliners do not express a clear preference for purchasing furniture offline or online, yet they tend to slightly prefer online channels. However, they last purchased a product offline. More members from Generation Y can be found than among ambiguous onliners than uninvolved offliners, as median value lies at 35 to 39 years. Ambiguous onliners are often living alone (48,5%) and tend to have a low income (38,4%), despite that they are mainly university graduates (49,3%). However, ambiguous onliners are also the most likely to have graduated from only primary school (9,9%), in comparison to the other segments, which might negatively influence income. Regarding their psychographic profiles, ambiguous onliners can be characterized as the segment with the greatest concern about shopping conveniences (13,2%), yet they are less concerned about services (4%) and the most averse to shopping online (6,7%). They also show a slightly higher preference for online shopping than for offline shopping. Interestingly, they also purchased furniture in-store more recently than online, what leads to the conclusion that they are quite inconsistent in their stated preference and their actual behavior.

#### **4.2.3 Strict Offliners**

Strict offliners show a strong preference for and a consistent behavior with purchasing furniture offline. Furthermore, strict offliners are more evenly distributed in their age and in their living situation. They are the most likely to live with children (33,7%) in comparison to members of the other segments. They tend to have a high income (39,8%) and a secondary school degree (49,9%). Members can also be described as not being concerned about the convenience (2,3%), less concerned about services (4,9%) and not averse to shop online (4%) although they never purchase furniture online and show the clearest preference and most consistent behavior for shopping offline.

#### **4.2.4 Ambiguous Offliners**

Ambiguous offliners demonstrate a clear preference for purchasing furniture offline, yet their actual purchasing behavior reveals that they purchase furniture both online and offline. Moreover, they can be described as more likely belonging to Generation Y, as they have a

median value at 35 to 39 years. Thus, ambiguous offliners are the youngest segment together with ambiguous onliners. Their living situation and income level is very evenly distributed; however, they tend to be graduates of a secondary school (51,5%). Psychographically they can be described as not really being concerned about conveniences (2,9%), the most concerned about services (7%), but also somewhat averse to buy furniture online (5,6%), despite having purchased furniture online in the past.

Within the framework of customers' purchase behavior of high involvement products within a multichannel context, the characteristics of the different profiles of the four segments will be compared with each other and with the assumptions based on previous findings in the literature. Furthermore, the most interesting and relevant findings will be presented and discussed. In this context, it is theorized that the different segments show unique profiles regarding demographic variables such as age, sex, education, income and a person's living situation and psychographic variables that are related to convenience orientation, risk aversion and service orientation. Characteristics of these variables were assumed to occur differently in the various segments and therefore to have different effects on the segments preferences and selections of online or offline channels.

#### **4.2.5 Demographics**

The chi-square test found, as previously mentioned, which segments differ in their demographic profiles for age, sex, education, income and a person's living situation. These will be further explained and discussed in this section.

##### *Age*

First, the results of this study show that ambiguous onliners and ambiguous offliners distinguish themselves from the segments that never purchase high involvement products online with regards to their relatively young age. The profiles show that the two segments with the youngest members, ambiguous onliners and ambiguous offliners, both select multiple channels for purchasing high involvement products, whereas the other two clusters show a purchasing behavior that takes place exclusively in offline channels. Thus, the following assumption is supported:

*Segments that select online channels when doing a purchase of high involvement products have a higher percentage of younger members on average than segments that select offline channels.*

This finding accords with previous research that found that young people are in general more likely to use online channels (McGoldrick & Collins, 2007; Richard & Purnell, 2017; Parment, 2013) and can be extended to high involvement products. In reference to these papers, this behavior is mainly based on the fact that young people, as belonging to Generation Y, are more likely to own a smartphone and to go online than older people. Consequently, Generation Y has more online experience than the older Generation X (McGoldrick & Collins, 2007; Richard & Purnell, 2017; Parment, 2013). This explanation might also be applicable for the findings that occur in the multichannel segmentation model and in reference to high involvement products. Thereby, young people's high level of experience with online channels could reduce the experienced risk of purchasing online, which in turn is increasingly perceived for high involvement products (Brunelle, 2009). In addition, the high level of experience could positively affect the perceived convenience of using an online channel, as people who are characterized with less online experience would

have to invest more time and energy to use a new platform like the online shop. This increased level of convenience orientation in turn positively affects the decision to purchase high involvement products through an online channel (Kollmann, Kuckertz & Kayser, 2012). However, the characteristics of the ambiguous onliners and ambiguous offliners also indicate that it has to be distinguished between the stated preference and the actual selection of an online channel among the segments. The previous findings that young people prefer online channels cannot be supported when looking at preferences of the segments. For instance, both the ambiguous offliners and the ambiguous onliners select online channels, although the latter segment has a strong preference for the offline channel and the ambiguous onliners show a slight preference for online channels. This difference in the stated preference and the actual selection might be based on factors that are moderating the effect of age on channel preference in the context of high involvement products such as a lower risk aversion and higher convenience orientation of younger generations in comparison to older generations due to their greater online experience. Thus, for ambiguous offliners the convenience of using online channels and the reduced perception of risk might outweigh reasons for selecting offline channels, even though there is a stated preference for using offline channels.

### Sex

Second, regarding the influence of the sex on channel preferences, the previous literature argues that sex is the strongest predictor for channel preference and more specifically that men are more likely to prefer online channels (Girard, Korgaonkar & Silverblatt, 2003; Richard & Purnell, 2017). Thus, it was expected that the segments that show a preference for online channels should dominantly consist out of male members, whereas the segments that prefer and select offline channels should contain higher percentages of female customers. Surprisingly, the results show that differences among the segments are not significant, which differs from the expectation that sex is the strongest factor predicting channel preferences. The actual characteristics of the segments are contrary to the findings of previous research because men and women are likely to prefer online or offline channels on an equal level when purchasing high involvement products. The fact that all segments can fundamentally be described as being evenly distributed in their sex (females: 52,5%; males: 47,5%) leads to the revision of the assumption:

*Segments that prefer and select online channels for purchasing high involvement products do not contain more male members and accordingly, segments with predominantly offline preferences and offline channel selections do not contain more female members.*

Moreover, in previous literature men are found to be more financially risk-taking than women (Charness and Gneezy, 2012), however these gender differences might be less important when purchasing high involvement products as men and women are found to be equally concerned about the quality and delivery of high involvement products in general ( $M_{\text{females}} = 0.24$ ;  $M_{\text{males}} = 0.21$ ). In this context, it might also be plausible that gender differences in taking risks are only observable to a critical point to which men are willing to take more financial risks, which is exceeded by the purchase of high involvement products. Thus, they might not show differences in their multichannel behavior in the context of high involvement products.

### ***Education***

Third, the previous literature found vague effects of an individual's level of education impacting his or her channel preference in the stage of purchase. The results of the present study lead to the impression that segments with a high level of education favor online channels, which is consistent to findings of Girard, Korgaonkar & Silverblatt (2003) that a higher level of education should lead to the preference of online channels. As the only segment that showed some preferences for online channels, the ambiguous onliners are characterized by having significantly more university graduates than the other segments, the following assumption is supported:

*Segments that prefer online channels for purchasing high involvement products have more members with higher education, whereas segments that prefer offline channels have less members with higher education.*

However, ambiguous onliners are also characterized as having the highest amount of people that graduated at a primary school only in comparison to the other segments, which leads to the fact that the assumption can still be supported. Nevertheless, the relationship between level of education and the preference for various channels when purchasing high involvement products needs to be investigated further. Looking at the actual selection of online channels, ambiguous onliners and offliners show different patterns. The ambiguous offliners are characterized as having the lowest number of university graduates, which lends support only to the assumption for segments that prefer online channels and not for segments that actually select online channels. Furthermore, Black et al. (2015) found that education triggers more financially risk-taking behavior, but the relationship is moderated by the sex of the respondents. Thus, one explanation might be that the occurrence of differences in education levels between segments with different channel preferences, but not between segments that select different channels, might be overshadowed by the fact that the segments are equal in the distribution of both sexes and that both sexes do not show differences in their risk aversion. Another explanation might be that the findings of higher education triggering the preference and selection of online channels are only applicable to a critical point to which high educated people are willing to take financial risks, which is exceeded by high involvement products.

### ***Income***

Fourth, income is found to distinguish online oriented segments from the offline oriented segments. It can be concluded that ambiguous onliners are found to contain more members with a low income and less members with a high income than all of the segments that prefer offline channels, which is the basis for the following conclusion:

*Segments that prefer to purchase high involvement products online contain less members with a high income, whereas segments that prefer offline channels have more members with a high income.*

Referring to the actual selection of channels, this finding does not find support when looking at all segments that actually chose an online channel for purchasing high involvement products, as the ambiguous offliners have the second highest amount of members with a high income and the third highest amount of members with a low income. However, the finding, that segments with more low-income members prefer online channels, extends ideas of Girard, Korgaonkar and Silverblatt (2003) that argue that income is related to purchasing products with features that are not easy to view beforehand, which are thus perceived as being

riskier in purchase (Kollmann, Kuckertz & Kayser, 2012). In this context, a negative relationship between the level of income and the preference for online channels is identifiable when looking at high involvement products. This finding, however, is contradictory to the findings of Grable (2000), who found that people with a higher income are more financially risk-taking. This contradiction might be explained by the fact that the moderating role of risk in the relation between income and channel selection might be less strong or even disappears when looking at high involvement products. Therefore, other factors like travel costs and delivery related difficulties might lead segments with a high amount of people with a low income to rather prefer online channels when buying high involvement products to save travel expenses and to elude possible negative consequences of having only a low income, like the decreased likelihood of having a car to transport the furniture home.

### ***Living Situation***

Fifth, the results of the present study indicate that significant differences in the living situations of members of the different segments were found. Thereby, ambiguous online users have the highest amount of people living alone and the smallest amount of people living together with a partner in comparison to other segments. This leads to the support of the following assumption:

*Segments that prefer online channels for purchasing high involvement products have more members living alone than segments that prefer offline channels.*

Ambiguous offline users are characterized by having different living situations than ambiguous online users. Thus, from the results it can be seen that the stated assumption is only valid for the stated preference and not for the actual behavior. This finding corroborates the previous findings that the living situation has an impact on channel preferences (McGoldrick & Collins, 2007; Neslin et al. 2006). Based on the significant differences of the segments, the results of McGoldrick and Collins (2007) and Neslin et al. (2006) might be applied to high involvement products as well.

### **4.2.6 Psychographics**

Next to demographic characteristics, the chi-square test also revealed that segments show differences in their psychographic profiles for risk aversion, convenience orientation and service orientation.

### ***Risk Aversion***

Regarding the influence of the risk aversion on channel preferences, risk aversion is found to be one of the most important factors leading consumers to avoid purchasing through an online channel and to choose an offline channel instead (Kollmann, Kuckertz & Kayser, 2012) because they perceive offline channels as being more familiar and less risky (Polo & Sese, 2016). Therefore, it was expected that segments that prefer and select offline channels contain more members with a higher level of risk aversion than the segments that prefer and select online channels when buying high involvement products. Surprisingly, the results of the present study reveal that differences among the segments are not significant and that findings of previous research cannot be supported when looking at high involvement products although risk aversion was found to be one of the most important factors in other studies. All segments can be described as being evenly distributed in their level of trust in IKEA as well

as in their risk aversion. This leads to the consequence of not supporting the expected assumption and revising the assumption to the following:

*Segments that prefer and select offline channels do not contain more members with a higher level of risk aversion than the segments that prefer and select online channels when buying high involvement products.*

However, clear tendencies are identifiable throughout all segments regarding their level of trust and their risk aversion. In this context, the majority of respondents has a low level of trust in IKEA (96,1%), although only 29,4% of all respondents are concerned about the quality of products. Even a smaller percentage of respondents is concerned about the delivery of products (18,3%). Therefore, the results indicate that the assumed negative relationship between the level of trust and the risk aversion is somewhat weak in the context of purchasing high involvement products. However, seeing the respondents being concerned of the quality and delivery of products isolated from their low level of trust, it has to be mentioned that the percentages of 18,3% and 29,4% are relatively high in comparison to other stated concerns. Thus, the fact that the segments are not significantly different in their risk aversion might be ascribed to tendencies that high involvement products trigger similar concerns about the quality and delivery of products among all respondents. More specifically, customers might show different levels of risk aversion to a critical point at which all customers show similar levels of risk aversion because potential losses might be perceived as being too high if the product increases in its risky characteristics. Therefore, high involvement products, such as furniture, might exceed this critical point, which results in not supporting previous findings in the study at hand, although those state that risk aversion is one of the most important factors for the preference of offline channels (Kollmann, Kuckertz & Kayser, 2012).

### ***Convenience Orientation***

Looking at a characteristic that distinguishes the ambiguous onlineers from the segments that prefer offline channels, the relatively high amount of members with concerns in regard to conveniences is salient. Therefore, the finding that ambiguous onlineers are the most unsatisfied ones with the offered convenience is coherent with the following assumption:

*Segments that prefer online channels when purchasing high involvement products are characterized by members with higher levels of convenience orientation than the segments that prefer offline channels.*

In this context, Kollmann, Kuckertz and Kayser (2012) argue that customers' convenience orientation positively affects the decision to purchase a product through an online channel because it contains more convenience elements. Applying the results of the study at hand, the assumption of Kollmann, Kuckertz and Kayser (2012) is supported with regards to the stage of purchase and might be extended to high involvement products as well. However, the support of the findings of Kollmann, Kuckertz and Kayser (2012) has to be revised. First, because ambiguous onlineers more recently purchased furniture offline than online and second since ambiguous offlineers do not contain higher numbers of convenience oriented members than the segments that never shop online. Thus, the findings are only valid for the preference for certain channels, but not for the actual channel selection. The results indicate that this can be ascribed to the fact that the convenience orientation of ambiguous onlineers outweighs their risk aversion in their stated preference for online channels. This is based on the fact that ambiguous onlineers show both, high concerns about conveniences, but also a high level of risk aversion for the quality and delivery of products. The high level of risk aversion, in turn,



is found to be a strong factor leading customers to purchase products offline (Kollmann, Kuckertz & Kayser, 2012). However, in reference to online channels, Kollmann, Kuckertz and Kayser (2012) found as well that convenience is a more important factor in the intention of purchasing a product online than risk aversion. Thus, the risk aversion and the convenience orientation have contradicting effects on the channel preference. Therefore, due to the fact that ambiguous onliners slightly prefer online channels, it can be assumed that the convenience orientation of members plays a more important role in preferring online channels than the risk aversion. This leads to the support of the following assumption:

*In regard to segments that prefer online channels the effect of the risk aversion gets overshadowed by the convenience orientation of members.*

However, this is not applicable for the actual channel selection of ambiguous onliners as they more recently purchased furniture offline than online. This inconsistency in the relationship of the stated preference and the actual channel selection thus leads to the support of both assumptions for the preference only and to the reversion of the last assumption for the actual channel selection. Thereby, the risk aversion is likely to outweigh the convenience orientation for the actual channel selection of ambiguous onliners and is leading to the choice of offline channels although there is a stated preference for online channels. For the preference and selection of offline channels, this leads to the reversion of the assumption, that the effect of the risk aversion gets overshadowed by the convenience orientation for segments that prefer online channels, to the following assumption:

*In regard to segments that prefer and select offline channels, the effect of the convenience orientation gets overshadowed by the risk aversion of members.*

This assumption finds support when combining the findings that all segments have relatively risk averse members and that all segments are characterized by selecting offline channels more recently or exclusively.

Surprisingly, ambiguous onliners are also the segment with the highest amount of people perceiving discomfort with purchasing furniture online, followed by the ambiguous offliners. These two segments are in turn the only ones that purchase high involvement products online. On the contrary, the other two segments that never purchase furniture online both have a very low amount of members feeling discomfort with purchasing online. These results differ from the expectation that segments that prefer and select offline channels include more members having discomforts with using online channels than segments that prefer and select online channels. However, the findings might be based on the fact that ambiguous onliners and ambiguous offliners utilize online channels more frequently, while strict offliners and uninvolved offliners have no experience with these channels and therefore do not experience discomfort. Additionally, these results indicate that the inconsistency in the relationship of the stated preference and the actual channel selection among the ambiguous onliners might be influenced by the discomfort of using the online channels. In this context, ambiguous onliners prefer to purchase high involvement products online, not only based on inconveniences and discomforts with the channel itself, but also on perceived risks, they make the actual purchase offline.

### ***Service Orientation***

Lastly, comparing the service orientation of the different segments, it was found that ambiguous onliners have the lowest amount of people that are concerned about services.

However, the differences with other segments are only marginal and that this is only true for a significance level of 0,1. In this context, the following assumption is getting supported:

*Segments that prefer offline channels contain more service oriented members than segments that prefer online channels when purchasing high involvement products.*

Ambiguous offliners, which select both offline and online channels when purchasing high involvement products, have the highest amount of people being concerned about services in comparison to the other clusters. Therefore, the assumption is only applicable for segments preferring offline channels and not for segments actually selecting offline channels. When looking at the preference, the results of the study at hand are coherent to findings of previous literature that service orientation influences channel preferences (Kollmann, Kuckertz and Kayser, 2012). Kollmann, Kuckertz and Kayser (2012) argue that offline channels are superior in their service touchpoints to online channels, which might be a suitable explanation for the preference of offline channels for purchasing high involvement products as well. Thereby, the relatively high level of risk that is attached to the purchase of high involvement products is likely to require more services, which in turn are found to decrease the perceived risk (Polo & Sese, 2016). This explanation is also applicable to channel selection, as all segments select offline channels more recently or exclusively. However, ambiguous onliners and ambiguous offliners also purchase high involvement products online. This might be based on the fact that the convenience orientation might outweigh the risk aversion and therefore the service orientation when selecting online channels, as mentioned before.

Lastly, in Table 4 an overview of the tested assumptions of each demographic and psychographic characteristic is presented, which indicates if the assumptions from the literature review were supported or not regarding preferring or selecting online and offline channels.

*Table 4: Overview of the tested assumptions*

Significant variables	Preference for online/offline channels	Selection of online/offline channels
Age	Not supported	Supported
Living Situation	Supported	Not supported
Income	Supported	Not supported
Education	Supported	Not supported
Convenience Orientation	Supported	Not supported
Service Orientation	Supported	Not supported
Online Discomfort	Not supported	Not supported

### 4.3 Comparison of the Segmentation Models

The third aim of the research is to compare the multichannel segmentation model to IKEA's traditional demographic segmentation approach regarding their explanatory function of selected performance measurements. More specifically, for the comparison, two one-way ANOVAs were performed that provide insights on whether the segments within each model have significantly different means in relation to customer loyalty, brand awareness, customer retention, sales volume and likelihood of purchase.

In consideration of the multichannel segmentation model and its four segments of *uninvolved offliners*, *ambiguous onliners*, *strict offliners* and *ambiguous offliners*, the one-way ANOVA reveals that all performance measurements show significant mean differences at a significance level of 0,05. Hence, all of the performance measurements differ from each other in their mean values in at least one of the segments. Thus, it implies that segments within the multichannel segmentation model are clearly different from each other in terms of customer loyalty, brand awareness, customer retention, sales volume and likelihood of purchase. More detailed information between which segments exactly these differences occurred is given in Appendix B.

In relation to the traditional demographic segmentation model and its segments *living alone*, *living together* and *living with children*, the one-way ANOVA presented remarkably different results. In this context, the one-way ANOVA with the living situation as the dependent variable only shows significant results for three out of the five variables. In this context, only the brand awareness, the sales volume and the likelihood of purchase show significant mean differences on the significance level of 0,05. The mean values of the customer retention and the customer loyalty are not significantly different between the segments. Thus, regarding those two variables it must be assumed that all means are equal and that equal levels of customer retention and customer loyalty characterize all segments.

Comparing the results of both ANOVAs, the segments of the multichannel segmentation model show differences in all tested variables, whereas the segments of the demographic segmentation are differing in only two out of five variables. More specifically, the findings imply that only the segments within the multichannel segmentation model are clearly different from each other in terms of customer loyalty, customer retention, brand awareness, sales volume and likelihood of purchase. Furthermore, by comparing the extent to which the segments differ within the three significant variables, the differences tend to be larger in the multichannel segmentation model than in the demographic model for the sales volume (multichannel: 0,37; demographic: 0,1) and the likelihood of purchase (multichannel: 0,27; demographic: 0,05), on average. Only regarding the brand awareness, the segments of the demographic segmentation model show bigger differences on average than the segments of the multichannel segmentation model (multichannel: 0,16; demographic: 0,19) (see Appendix C). Thus, the multichannel segmentation model provides a clearer division of the performance measurements among its segments than the demographic segmentation. This can be ascribed to the facts that the multichannel segmentation model is able to generate segments with significant mean differences in more performance measurements and these differences tend to be larger on average. These findings correspond to the assumption of Valentine and Powers (2013) that argue that demographic segmentation reveals who customers are, but that it does not generate deeper insights into consumer behaviors and interactions with the specific brand. More specifically, in comparison to the demographic segmentation model, the multichannel

segmentation model provides information about which customers interact with a brand in which channel. Furthermore, it provides more detailed information about the relationship between the retailer and the customer, like the customer loyalty or customer retention, which the demographic segmentation does not provide as clear.

#### **4.4 Chapter Summary**

A multichannel segmentation model for purchasing high involvement products was established, which resulted in four segments. More specifically, there was a clear preference for offline channels in three of the segments including the uninvolved offliners, the strict offliners and the ambiguous offliners. However, one of the segments, the ambiguous onliners, was characterized by having a slight preference for online channels. In consideration of the channel selection, only the ambiguous offliners and the ambiguous onliners selected online and offline and thus showed a multichannel behavior. The uninvolved offliners and strict offliners exclusively selected offline channels for making purchases.

Furthermore, the segments were profiled according to selected demographic and psychographic characteristics, which provided detailed descriptions of each segment and the differences between them. In general, the segments differed significantly in their members' age, living situation, income, education, convenience orientation, service orientation and online discomfort. More precisely, differences between channel preferences were found for living situation, income, education, convenience orientation and service orientation. Moreover, the segments' channel selection only differed in the members' age and the discomfort of shopping online. Findings regarding the latter characteristic were contrary to the expectations as only ambiguous onliners and ambiguous offliners, which are the only segments selecting online channels, showed discomforts with shopping online. The other two segments did not show discomforts with shopping online, although they never do so. However, no significant differences between the segments were found for sex, level of trust and risk aversion regarding the quality and delivery of products, which was very surprising as sex and risk aversion were found in previous literature to be strong factors influencing a customer's channel preference and selection. Hence, the segments were evenly distributed for both sexes as well all segments disclosed a relatively high level of risk aversion and low level of trust.

By comparing the multichannel segmentation model to the traditional demographic segmentation model, the segments of the multichannel segmentation model show differences in all tested performance measurements. However, the demographic segmentation model only shows mean differences in three out of five variables: brand awareness, sales volume and likelihood of purchase. The average mean differences tend to be larger in the multichannel segmentation model than in the demographic model for two of the three significant variables. Given these points, the multichannel segmentation model provides a clearer division of the performance measurement among its segments than the demographic segmentation.

## 5. Conclusion

The purpose of this study was to generate a multichannel segmentation model for high involvement products and to compare it to the demographic segmentation model. The focus on high involvement products revealed extensive differences to previous studies that have limited their multichannel segmentation models to specific product categories (Konus, Verhoef & Neslin, 2008) and industries (de Keyser, Schepers & Konus, 2015; Sands et al. 2016). The present multichannel segmentation generated a unique set of segments that is salient in its strong preferences and selections of offline channels. Thereby, the results reveal that three out of four segments have a clear preference for offline channels while only one segment had a slight preference for online channels. These findings confirm Brunelle (2009), who found a presence of clear and strong preferences for offline channels when high involvement products are getting purchased. The high involvement products are responsible for this outcome insofar as they are perceived as being attached to higher levels of risks (Brunelle, 2009), which is also the case in the present research as all segments show a relatively high level of risk aversion. Thus, the characteristic of high involvement products as being riskier to purchase leads to drastic consequences in customers' preferences and selections of channels, which are unlikely to be found among low involvement products and therefore lead to a unique set of segments. This had not yet been found in the previous literature. However, the findings in the multichannel segmentation model also revealed the existence of a multichannel behavior as two of the segments selected both online and offline channels. This shows that the multichannel behavior in previous research (Konus, Verhoef & Neslin, 2008; Sands et al. 2016) is also present to some extent in the frame of a high product involvement, yet with somewhat different characteristics. The differences further underscore the theoretical importance of including the level of product involvement into the model of multichannel segmentation. These points underline the relevance and topicality of the topic and lead to the conclusion that it is relevant to also consider the product involvement when doing multichannel segmentation, instead of only looking at certain industries or product categories.

Furthermore, the research aimed to describe and analyze which demographic and psychographic characteristics tend to occur with specific segments. The segments were profiled on the basis of demographic variables as well as psychographic variables that were adapted from Kollmann, Kuckertz and Kayser (2012). Applying the findings to the segmentation of customers in a multichannel environment, it can be concluded that some characteristics play a minor role when segmenting customers in industries with high involvement products. These include a customer's sex, level of trust and risk aversion regarding both, the quality of products and the delivery. However, other demographic and psychographic variables are concluded to be reliable predictors for the membership of a specific segment, such as a customer's age, living situation, income, education, convenience orientation, service orientation and discomfort with shopping online. Thus, it can be concluded that these variables are valuable to identify when segmenting for high involvement product, which provides a first theoretical understanding of who and how customers are that purchase high involvement products on certain channels. In addition, the study at hand concludes that under certain circumstances and for certain segments, some characteristics might outweigh other characteristics and reinforce inconsistencies between the stated channel preference and the actual channel selection. Thereby, the convenience orientation and the risk aversion have been assumed to moderate the effects of many variables on channel preferences and channel selections. Looking more specifically at the risk aversion, which was equally strong for all segments, it can be concluded that some demographic and psychographic effects

might be only visible to a critical point to which people with different characteristics are willing to take more financial risks than others, which is exceeded by high involvement products.

Lastly, the research aimed to identify which of the segmentation models most appropriately fits modern retailing by comparing whether the models show differences regarding performance measurements such as customer retention, brand awareness, customer loyalty, sales volume and likelihood of purchase. The multichannel segmentation model had more significant differences in all of the performance measurements whereas the demographic segmentation model revealed differences in three out of five measurements only. Furthermore, these differences tended to be larger between the segments in the multichannel segmentation model than in the demographic segmentation model. This comparison is especially interesting, since the purpose of segmenting a market is to divide heterogeneous customers into segments with homogeneous preferences and needs (Smith, 1956; Chin-Feng, 2002) which enables companies to adapt their marketing strategies (Söderlund, 1998) and target specific groups more strategically (Pride and Ferrell, 1983; Krüger & Stumpf, 2013; Venkatesan, Kumar & Ravishanker, 2007). Larger differences between the segments in the multichannel segmentation model imply that marketing strategies can be targeted differently to satisfy the needs within the segments more precisely. Thus, based on the comparison it can be concluded that the multichannel segmentation model might be a more contemporary relevant segmentation strategy than the traditional demographic segmentation model. This conclusion is consistent with previous research that has argued that demographic segmentation is not a relevant tool for targeting more empowered consumers today and in the future (Quinn, Hines and Bennison, 2007). Instead, segmenting customers according to a multichannel segmentation better explains preferences and behavioral patterns of more empowered and fragmented consumers (de Keyser, Schepers & Konuş, 2015; Konuş, Verhoef & Neslin, 2008; Sands et al. 2016).

These findings can contribute theoretically as well as practically, but are still limited in their generalizability and statistical depth. Therefore, the theoretical and practical contributions and the limitations and the future outlook will be presented more detailed in the following sections.

## **5.1 Theoretical Contributions**

The present multichannel segmentation generated a unique set of segments, which is salient in its strong preference and selection of offline channels. Thereby, it demonstrates differences to previous research (Konuş, Verhoef & Neslin, 2008; Sands et al. 2016), which further underlines the theoretical importance of including the level of product involvement into the model of multichannel segmentation. Additionally, it provides new insights that extend the knowledge in both the multichannel and the segmentation literature. In this context, it reveals that online channels seem to play a less important role for the majority of customers when purchasing high involvement products, which represents a theoretical basis for further investigations, as online channels are believed to become more and more important for other products or in practice.

Furthermore, high involvement products are a suitable and important aspect when doing a multichannel segmentation and might act as a theoretical basis to then look deeper into specific product categories or industries in a next step. The paper adds a theoretical

foundation, which is more generalizable for many product categories and industries dealing with high involvement products. Looking at the product type first, however, might be too specific and not generalizable to other product categories and thus less meaningful in theory as well as in practice. Accordingly, the focus on product involvement has introduced an alternative to how segmentation models can be generalized that goes beyond the boundaries of product categories (Konus, Verhoef & Neslin, 2008) and industries (de Keyser, Schepers & Konuş, 2015; Sands et al. 2016), which have previously been the frame for multichannel segmentation.

In addition, combining findings from previous literature with the occurrence of the demographic and psychographic characteristics in the context of the multichannel segmentation model, this paper contributed to a holistic description of the segments. Moreover, the demographic and psychographic profiles have indicated which variables are more important when describing segments for high involvement products and it provides a theoretical basis for further testing these relations with regards to channel preferences and channel selections for purchasing high involvement products. This simultaneously highlights the theoretical importance of looking at not only high involvement products separately when segmenting customers, but also testing the effects and moderating or mediating roles of the investigated variables on channel preferences and selections.

Finally, the comparison of the multichannel segmentation model with a traditional demographic segmentation model has enabled an evaluation of both, and has provided a more precise understanding of which model captures customers' fragmented multichannel behavior. Thus, this paper contributes theoretically, as it gives a first indication that a multichannel segmentation model might be more contemporary relevant, which has been extensively discussed in previous literature, but not explicitly compared. Thus, the findings can confirm theoretical assumptions that have been made in previous literature, underline the topicality of multichannel segmentation and add a theoretical basis that motivates further investigations of multichannel behavior for high and low involvement products and its relation to demographic and psychographic variables.

All in all, the primary theoretical contribution of this research is that it has extended the multichannel and segmentation literature with a multichannel segmentation model for high involvement products. And further, it adds a theoretical foundation, which is generalizable for many product categories and industries. Moreover, the demographic and psychographic profiles have indicated which variables are more important when describing segments for high involvement products as well as it provides a theoretical basis for further testing these relations in regards to channel preferences and channel selections for purchasing high involvement products. Additionally, the comparison to the demographic segmentation with the multichannel segmentation model provided valuable theoretical findings as it gives a first indication of which segmentation approach is more contemporary relevant to segment customers a multichannel environment.

## **5.2 Practical Contributions**

Today, multichannel retailers are facing challenges in terms of more fragmented and empowered consumers, which makes the segmentation of consumers increasingly difficult (McGoldrick and Collins, 2007; Quinn, Hines and Bennison, 2007). As previously mentioned, the segments displayed unique and valuable findings as they both indicated a clear preference

for offline channels, but simultaneously a multichannel behavior in their channel selection. This increases the importance that retailers that are merchandising high involvement products in multiple channels need to specifically understand the multichannel behavior of their customers and target them according to these. The existence of a clear preference for offline channels when purchasing high involvement products is especially interesting in a retail environment where mostly online channels are discussed to be the future of retailing. Hence, it might not be relevant for these kinds of retailers to focus more and more on online channels. Instead, these findings reveal that offline channels are still the most frequently used platform to purchase high involvement products and it could be valuable for retailers to maintain the offline channels and simultaneously to improve the online channels, as some of the segments select both of these types of channels. Thereby, it might even be reasonable to strengthen the attributes that distinguish offline channels from online channels, as these are playing an important role for purchasing high involvement products and they are adding value and security to the offered product.

Moreover, the research provides a broad and practical basis for segmenting customers based on their multichannel behavior for purchasing high involvement products. In this context, by looking at the product involvement first, the rough direction for channel preferences can be identified, which is a handy guideline for companies that produce similar products and that also have a multichannel strategy in practice. In a next step, the findings could be broken down even more when segmenting according to specific product types that belong to the same category of product involvement. Thus, although the study focuses on IKEA Sweden as a single case, it contributes with insights and a practical segmentation model that can also be seen as highly relevant for multichannel retailers with products other than furniture as many high involvement products have similar characteristics, making them characterized as high involvement products. However, home furnishing products also have some specific characteristics that might not be found within other high involvement products such as the need for a specialized transportation, which might influence the findings. Thus, the convenience orientation and risk aversion regarding the delivery of products might have less strong effects for other high involvement products.

Further, the research at hand is providing retailers with relevant insights regarding multichannel consumer behavior and demographic and psychographic characteristics that tend to occur with diverse multichannel behaviors. The demographic and psychographic profiles of the multichannel segmentation model, which relied on the theoretical framework and confirmed that age, living situation, income, education, convenience orientation, service orientation and online discomfort, can successfully be used to explain the differences between the segments. In addition, it indicates that these variables can be utilized as a feasible and handy tool for categorizing customers beyond the sample frame into the established segments. Moreover, the profiling revealed the unexpected finding that ambiguous onliners and ambiguous offliners, which both use online channels to a various extent, simultaneously show a discomfort with the online channels. Thus, this indirectly informs about the need of improvement of certain channels, just as the improvement of convenience or service elements in the online channel, to better meet the needs of the customers using these channels.

And lastly, the comparison of the multichannel segmentation with a demographic segmentation model is especially interesting for managers as it provides insights that a multichannel perspective is explaining more variance in customers' fragmented multichannel purchasing behavior than the demographic approach, which does not distinguish between various channels. Furthermore, it divides segments more clearly according to performance measurements. Thus, these insights can be used for retailers to review their traditional



demographic segmentation approach and to aim at dividing their customers within the multichannel environment into target groups with specific needs and characteristics. Thus, it simplifies drawing individualized action plans and strategies to improve the overall performance, which represents one major reason to segment customers as well. The multichannel segmentation model adds value insofar that it directly identifies the channels and platforms that specific segments of customers can be targeted through. It would also allow for a more strategic and effective way to stimulate the target groups with adapted communications and value propositions to increase the overall performance of the company and therefore to generate a competitive advantage.

All in all, this research contributes practically as the established segmentation model is a contemporary relevant instrument for retailers selling high involvement products to segment their customers. The multichannel segmentation first shows which channels are the most frequently used as well as which customers use these channels. Second, it also gives an indication of which channel to use when targeting specific groups of customers and it reveals the potential improvements for every channel. Thus, by adapting the multichannel segmentation model, companies can design more individualized marketing strategies for specific customers and specific channels to more efficiently target certain groups of customers and improve the overall value and competitive advantages. Further, the generation of demographic and psychographic profiles is a handy tool for categorizing customers beyond the sample frame into the established segments. And lastly, the comparison of the adjusted multichannel segmentation model to the traditionally used demographic approach contributes practically as it gives an indication that retailers that are following a multichannel strategy should use a multichannel segmentation model as well. In this context, the latter segmentation takes multiple channels into account and allows for a more strategic and effective way to stimulate target groups with adapted communication and value propositions to increase the overall performance.

### **5.3 Limitations and Future Research**

The aim of this study was primary to establish a multichannel segmentation model for high involvement products and secondly to compare the multichannel segmentation model with demographic segmentation. The results from the single case study discovered that there is still a need for further investigations to increase the external validity of the findings. In this context, the single case study could be replicated by repetitive case studies, which would generate multichannel segmentation models for various companies that are merchandising high involvement products and therefore strengthen or weaken findings of the present research. An alternative would be to replicate the study with a large survey that covers consumers more generally within different product categories that are associated with high product involvement. Hence, these kinds of methods would increase the external validity and therefore the generalizability of the multichannel segmentation model (Easterby-Smith, Thorpe & Jackson, 2015; Bryman & Bell, 2013).

The results indicated that high involvement products provide a basis for multichannel behavior, despite the fact that it previously has been only associated with offline channels. Conversely, low involvement products are found in previous literature to be typically associated with consumers preferring and using online channels (Brunelle, 2009; Zhang & Reichgelt, 2006), which makes it interesting to investigate differences in customers' multichannel behavior by distinguishing between the level of product involvement. Thus,

future research could make the results of the study at hand even more valuable by comparing high and low involvement products. This would allow researchers to directly identify differences in the configuration of various sets of segments for low and high involvement products, which can be only assumed in the present study based on findings of the previous literature. It could further be identified which demographic and psychographic variables are the more important factors influencing the preference and selection of certain channels for both product types. This study would support and advance the use of the product involvement as a guideline in multichannel segmentation models to then concentrate more on specific product types or specific industries to individualize the segmentation model.

The present study was limited in regards to the analysis of statistical relationships between the profiling variables and channel preferences and selection. In this context, assumptions were only made and supported according to the established segments as the assumptions were tested using frequencies only because the statistical analysis of the relationship of every variable to the segmenting variables as well as the identification of moderating and mediating effects would have gone beyond the scope of the paper. However, it would still be interesting to analyze these relationships more in-depth for high involvement products as well as for low involvement products as some curiosities emerged that indicated that some relationships were for example not linear. It is also to mention that only some literature was previously found to directly analyze the direct, moderating or mediating effects of certain variables on the purchase of high and low involvement products. Future research could improve, support and revise the findings of the present research by looking more in-depth into the effects of the tested variables on channels preferences and channel selections.

Lastly, the research constructed the theoretical and practical basis for a multichannel segmentation model for high involvement products, yet there is still a possibility to increase the level of complexity of the model by adjusting it to the increasingly more complex multichannel environment. Within the context of multichannel retailing, new channels such as social media are continuously introduced (Rapp et al. 2013), which change the behavior of consumers (Ansari, Mela & Neslin, 2008; Verhoef, Kannan & Inman, 2015; Polo & Sese, 2016). Since some of these channels are mainly restricted to the pre- and post-purchase stage, it would be also valuable to broaden the scope from studying the purchase into looking at the entire purchase journey. In addition, it would be especially interesting for high involvement products, as these products are associated with a consumer behavior that includes long search processes and the valuing of services. Thus, a more complex multichannel segmentation model could possibly show that some of the newly introduced channels can substitute or complement the contemporary preferred offline channels and that customers also show a multichannel behavior within other channels than the investigated ones.

## 6. Reference List

- Angell, R., Megicks, P., Memery, J., Heffernan, T., & Howell, K. (2012). Understanding the older shopper: A behavioural typology, *Journal Of Retailing And Consumer Services*, vol. 19, pp.259-269
- Ansari, A., Mela, C., & Neslin, S. (2008). Customer Channel Migration, *Journal of Marketing Research*, vol. 45, no. 1, pp.60-76
- Bendoly, E. (2006). Online/in-store integration and customer retention, *Journal Of Service Research*, vol. 7, no. 4, pp.313-327
- Bernstein, R. (1983). Beyond objectivism and relativism: Science, hermeneutics, and praxis. Philadelphia: University of Pennsylvania Press
- Black, S. E., Devereux, P. J., Lundborg, P., & Majlesi, K. (2015). Learning to Take Risks? The Effect of Education on Risk-Taking in Financial Markets, Department of Economics, working paper. no. w21043. National Bureau of Economic Research.
- Blanca, H., Julio, J., & José, M. (2011). Age, gender and income: do they really moderate online shopping behaviour?, *Online Information Review*, vol. 35, no. 1, pp.113-133
- Blei, D. M., & Lafferty, J. D. (2009). Topic models. *Text mining: classification, clustering, and applications*, vol. 10, no. 71, p.34
- Brunelle, E. (2009). The moderating role of cognitive fit in consumer channel preference. *Journal of Electronic Commerce Research*, vol. 10, no. 3, pp.178-195
- Bryman, A & Bell, E. (2013). *Företagsekonomiska forskningsmetoder*. Stockholm: Liber.
- Burns, R. B. & Burns, R. A. (2008). *Business Research Methods and Statistics Using SPSS*. London: Sage Publications
- Bäckström, K. & Johansson, U. (2006). Creating and consuming experiences in retail store environments: Comparing retailer and consumer perspectives. *Journal of Retailing and Consumer Services*, vol. 13, no. 6, pp.417-430
- Charness, G. & Gneezy, U. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization*, vol. 83, no. 1, pp.50-58
- Chin-Feng, L. (2002). Segmenting customer brand preference: demographic or psychographic, *Journal of Product & Brand Management*, vol. 11, no. 4, pp.249-268
- Chocarro, R., Cortiñas, M. & Villanueva, M.-L. (2013). Situational variables in online versus offline channel choice, *Electronic Commerce Research and Applications*, vol. 12, no. 5, pp.347-361
- Comte, A. (1853). *The Positive Philosophy of August Comte*, Translated by H. Martineau, 2002, London: Trubner

- Dennis, C., Alamanos, E., Papagiannidis, S., & Bourlakis, M. (2016). Does social exclusion influence multiple channel use? The interconnections with community, happiness, and well-being. *Journal of Business Research*, vol. 69, no. 3, pp.1061-1070
- Easterby-Smith, M., Thorpe, R. & Jackson, P.R. (2015). *Management and Business Research*. London: SAGE Publications.
- Elg, U. & Hultman, J. (2016). CSR: retailer activities vs consumer buying decisions. *International Journal of Retail & Distribution Management*, vol. 44, no. 6, pp.640-657
- Farag, S., Schwane, T. & Dijst, M. (2005). Empirical investigation of online searching and buying and their relationship to shopping trips, *Transportation Research Record*, 1926, pp.242–251.
- Fernández-Sabiote, E., & Román, S. (2016). The multichannel customer's service experience: building satisfaction and trust. *Service Business*, vol.10, no. 2, pp.423-445.
- Fill, C. (2002). *Marketing Communications, Contexts, Strategies and Applications*, Essex England: Financial Times Prentice Hall
- Fuat Firat, A. & Shultz, C.J. (1997). From segmentation to fragmentation: markets and marketing strategy in the postmodern era. *European journal of marketing*, vol. 31, no. 3, pp.183-207
- Girard, T., Korgaonkar, P. & Silverblatt, R. (2003), Relationship of Type of Product, Shopping Orientations, and Demographics with Preference for Shopping on the Internet, *Journal of Business and Psychology*, vol. 18, no. 1, pp.101-120
- Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, vol. 14, no. 4, pp.625-630
- Guba, E. & Lincoln, Y. (1994). Competing paradigms in qualitative research, in N. Denzin & Y. Lincoln (eds), *Handbook of qualitative research*. London: Sage, pp.105-117
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: a global perspective*. 7th ed. Upper Saddle River, New Jersey: Pearson Education
- Hoyer, W. & Brown, S. (1990). Effects of Brand Awareness on Choice for a Common, Repeat-Purchase Product, *Journal Of Consumer Research*, vol. 17, no. 2, pp.141-148
- Hughes, J. A. (1990). *The Philosophy of Social Research*, 2nd edn, Harlow: Longman.
- HUI Research. 2017. E-barometern årsrapport 2016 [pdf] Available online: <http://pages.postnord.com/rs/184-XFT-949/images/e-barometern-arsrapport-2016.pdf> [Accessed 1 April 2017]

- Jansson, J., Marell, A., & Nordlund, A. (2009). Elucidating green consumers: A cluster analytic approach on proenvironmental purchase and curtailment behaviors. *Journal of Euromarketing*, vol. 18, no. 4, pp.245-267
- Kamineni, R. (2005). The Next Stage of Psychographic Segmentation: Usage of Enneagram, *Journal of American Academy of Business*, vol.6, no.1, pp.315-320.
- Kaplan, A. M. & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, vol. 53, no. 1, pp.59-68
- Karimi, S., Papamichail, K.N. & Holland, C.P. (2015). The effect of prior knowledge and decision-making style on the online purchase decision-making process: A typology of consumer shopping behaviour. *Decision Support Systems*, vol. 77, pp.137-147
- Keeney, R. (1999). The value of internet commerce to the customer. *Management Science*, vol. 45, no. 4, pp.533–542
- Keller, KL. (2009). Building strong brands in a modern marketing communications environment, *Journal Of Marketing Communications*, vol. 15, no. 2, pp.139-155
- de Kerviler, G., Demoulin, N. T. & Zidda, P. (2016). Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers?, *Journal of Retailing and Consumer Services*, vol. 31, pp.334-344
- de Keyser, A., Schepers, J. & Konuş, U. (2015). Multichannel customer segmentation: does the after-sales channel matter? A replication and extension, *International Journal of Research in Marketing*, vol. 32, no. 4, pp.453–456
- Kollmann, T., Kuckertz, A. & Kayser, I. (2012). Cannibalization or synergy? Consumers' channel selection in online–offline multichannel systems. *Journal of Retailing and Consumer Services*, vol. 19, no. 2, pp.186-194
- Konuş, U., Verhoef, P. & Neslin, S. (2008). Multichannel Shopper Segments and Their Covariates, *Journal of Retailing*, vol. 84, no. 4, pp.398-413
- Kotler, P. & Armstrong, G. (1999). *Principles of Marketing*, 8th edn, Upper Saddle River: Pearson Education
- Kotler, P., Wong, V., Saunders, J. & Armstrong, G. (2005). *Principles of Marketing European Edition*, 4<sup>th</sup> edn, Essex: Pearson Prentice Hall
- Krüger, R. & Stumpf, A. (2013). *Brand Growth Barriers. Identify, Understand, and Overcome Them*. Frankfurt: Springer
- Krugman, H. E. (1965). The Impact of Television Advertising: Learning without Involvement, *Public Opinion Quarterly*, vol. 29, no. 3, pp.349-356

- Kumar, V. & Venkatesan, R. (2005). Who are multichannel shoppers and how do they perform? Correlates of multichannel shopping behavior, *Journal of Interactive Marketing*, vol. 19, no. 2, pp.44–61
- Lee, M. C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, vol. 8, no. 3, pp.130–141
- Leven, W. (1983). Der Zusammenhang zwischen Informationsaufnahme und Informationsspeicherung beim Betrachten von Werbeanzeigen. *Marketing: Zeitschrift für Forschung und Praxis*, vol. 5, no. 1, pp.13-28
- Levy, M. & Weitz, B.A. (2009). *Retailing Management*, New York: McGraw-Hill
- Madlberger, M. (2006). Exogenous and endogenous antecedents of online shopping in a multichannel environment: evidence from a catalog retailer in the German-speaking world., *Journal of Electronic Commerce in Organizations*, vol. 4, no. 4, pp.29–51
- Malhotra, N. K. (2010). *Marketing Research: An Applied Orientation*. 6th edn. Upper Saddle River: Pearson Education
- McGoldrick, P. & Collins, N. (2007). Multichannel retailing: profiling the multichannel shopper. *The International Review of Retail, Distribution & Consumer Research*, vol. 17, no. 2, pp.139-158
- McKinsey (2013). The road to 2020 and beyond: What’s driving the global automotive industry? [pdf] Available at: <http://www.mckinsey.com/industries/automotive-and-assembly/our-insights/the-road-to-2020-and-beyond-whats-driving-the-global-automotive-industry> [Accessed 16 May 2017]
- Montoya-Weiss, M.M., Voss, G.B. & Grewal, D. (2003). Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the Academy of Marketing Science*, vol. 31, no. 4, pp.448–458
- Morgan, C. M., Levy, D. J. & Fortin, M. (2003) Psychographic Segmentation, *Communication World*, vol.20, no.1, pp.22
- Morissette, L. & Chartier, S. (2013). The K-Means Clustering Technique: General Considerations and Implementation in Mathematica. *Tutorials in Quantitative Methods for Psychology*, vol. 9, no. 1, pp.15-24
- Moser, C. A. (1952). Quota Sampling, *Journal of the Royal Statistical Society*, vol. 115, no. 3, pp.411-423
- Murphy, P. E. & Enis, B. M. (1986). Classifying products strategically. *The Journal of Marketing*, vol. 50, no. 3, pp.24-42
- Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M. L., Thomas, J. S. & Verhoef, P. C. (2006). Challenges and opportunities in multichannel customer management, *Journal of Service Research*, vol. 9, no. 2, pp.95–112

- Nunes, P. & Cespedes, F. (2003), The Customer Has Escaped, *Harvard Business Review*, vol. 81, no. 11, pp.96-105
- Parment, A. (2013). Generation Y vs. Baby Boomers: Shopping behavior, buyer involvement and implications for retailing. *Journal of retailing and consumer services*, vol. 20, no. 2, pp.189-199
- Petty, R. E., Cacioppo, J. T. & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of consumer research*, vol. 10, no. 2, pp.135-146
- Polo, Y. & Sese, F. (2016). Does the nature of the interaction matter? Understanding customer channel choice for purchases and communications, *Journal Of Service Research*, vol. 19, no. 3, pp.276-290
- Pride, W. M. & Ferrell, O. C. (1983). Marketing: basic concepts and decisions. Boston: Houghton Mifflin Company
- Quinn, L., Hines, T. & Bennison, D. (2007). Making sense of market segmentation: a fashion retailing case, *European Journal of Marketing*, vol. 41, no 5, pp.439-465
- Rapp, A., Beitelspacher, L.S., Grewal, D. & Hughes, D.E. (2013). Understanding social media effects across seller, retailer, and consumer interactions, *Journal of the Academy of Marketing Science*, vol. 41, no. 5, pp.547–566
- Razak, M., Ilias, A. & Rahman, R.A. (2009). Differentiation strategies of internet retailing (unique, value and return): a focused web evaluation into airline service provider. *International Business Research*, vol. 2, no. 2, pp.40–47
- Reinartz, W. & Kumar, V. (2002). The mismanagement of customer loyalty, *Harvard Business Review*, vol. 80, no. 7, pp.4-12
- Richard, J. & Purnell, F. (2017). Rethinking Catalogue and Online B2B Buyer Channel Preferences in the Education Supplies Market, *Journal Of Interactive Marketing*, vol. 37, pp.1–15
- Riquelme, I., Román, S. & Iacobucci, D. (2016). Consumers' Perceptions of Online and Offline Retailer Deception: A Moderated Mediation Analysis, *Journal Of Interactive Marketing*, vol. 35, pp.16–26
- Rohm, A. J. & Swaminathan, V. (2004). A typology of online shoppers based on shopping motivations. *Journal of Business Research*, vol. 57, no. 7, pp.748–757
- Sands, S., Ferraro, C., Campbell, C. & Pallant, J. (2016). Segmenting multichannel consumers across search, purchase and after-sales. *Journal of Retailing and Consumer Services*, vol. 33, pp.62-71
- Saunders, M., Lewis, P. & Thornhill, A. (2009). Research methods for business students, 5th edn, Harlow: Pearson Education Limited

- Schoenbachler, D. D. & Gordon, G. L. (2002). Multichannel shopping: understanding what drives channel choice. *Journal of Consumer Marketing*, vol. 19, no. 1, pp.42–53
- Schröder, H. & Zaharia, S. (2008). Linking multi-channel customer behavior with shopping motives: An empirical investigation of a German retailer, *Journal Of Retailing And Consumer Services*, vol. 15, no. 6, pp.452-468
- Shankar, V., Venkatesh, A., Hofacker, C. & Naik, P. (2010). Mobile marketing in the retailing environment: current insights and future research avenues. *Journal of Interactive Marketing*, vol. 24, pp.111–120
- Shih, H.P. (2004). An empirical study on predicting user acceptance of e-shopping on the Web, *Information and Management*, vol. 41, no 3, pp.351–368
- Smith, W.R. (1956). Product differentiation and market segmentation as alternative marketing strategies, *Journal of marketing*, vol. 21, no 1, pp.3-8
- Stake, R. (2006). *Qualitative case studies*, 3rd edn, Thousand Oaks, CA: Sage.
- Statista. (2017). Statistics and facts on IKEA. Available online: <https://www.statista.com/topics/1961/ikea/> [Accessed 26 April 2017]
- Söderlund, M. (1998). *Segmentering – Om marknadsföring på fragmenterade marknader*. Stockholm: Liber Ekonomi
- Thomas, J. S. & Sullivan, U. Y. (2005). Managing marketing communications with multichannel customers. *Journal of Marketing*, vol. 69, no. 4, pp.239-251
- Valentine, B. D. & Powers, L. T. (2013). Generation Y values and lifestyle segments. *Journal of consumer marketing*, vol. 30, no. 7, pp.597-606
- van Bruggen, G.H., Antia, K.D., Jap, S.D., Reinartz, W.J. & Pallas, F. (2010). Managing marketing channel multiplicity. *Journal of Service Research*, vol. 13, no. 3, pp.331–340
- Vasiliu, C., Felea, M., Albăstroiu, I., & Dobrea, M. (2015), Identifying Key Factors Affecting Purchase of IT&C Products by Young Consumers in the Multichannel Retailing Context, *International Journal Of Economic Practices & Theories*, vol. 5, no. 5, pp.478-486
- Veckans Affärer. (2016). Det här är Sveriges 500 största företag 2016. Available at: <https://www.va.se/nyheter/2016/11/29/det-har-ar-sveriges-500-storsta-foretag-2016/>, [Accessed 26 April 2017]
- Venkatesan, R., Kumar, V. & Ravishanker, N. (2007). Multichannel shopping: causes and consequences. *Journal of Marketing*, vol. 71, no. 2, pp.114-132



- Verhoef, P. C., Kannan, P., & Inman, J. (2015). From Multi-Channel Retailing to Omni Channel Retailing. Introduction to the Special Issue on Multi-Channel Retailing, *Journal Of Retailing*, vol. 91, no. 2, pp.174-181
- Verhoef, P. C., Neslin, S. A. & Vroomen, B. (2007), Multichannel Customer Management: Understanding the Research-Shopper Phenomenon, *International Journal of Research in Marketing*, vol. 24, no. 2, pp.129–148
- Wang, R. J. H., Malthouse, E. C. & Krishnamurthi, L. (2015). On the go: how mobile shopping affects customer purchase behavior, *Journal of Retailing*, vol. 91, no. 2, pp.17–234
- Yim, O. & Ramdeen, K. T. (2015). Hierarchical cluster analysis: comparison of three linkage measures and application to psychological data, *Quantitative Methods Psychology*, vol. 11, pp.8-21
- Zhang, A. & Reichgelt, H. (2006). Product complexity as a determinant of transaction governance structure: an empirical comparison of web-only and traditional banks. *Journal of Electronic Commerce in Organizations*, vol. 4, no. 3, pp.1-17
- Zhang, J., Farris, P. W., Irvin, J. W., Kushwaha, T., Steenburgh, T. J. & Weitz, B. A. (2010). Crafting integrated multichannel retailing strategies. *Journal of Interactive Marketing*, vol. 24, pp.168–180

## Appendix A

### *Description of Secondary Data*

Variable/construct used in the analysis	Original variable	Question in the original questionnaire	Optional answer in the original questionnaire
<b>Psychographic profiling variables</b>			
Convenience Orientation (construct)	Easy and smooth shopping experience	How much would you agree with that “easy and smooth shopping experience” is accurate in regards to IKEA? Choose the alternative that most accurately describes your perception.	Completely agree (1), agree to some extent (2), Neither agree nor disagree (3), Do not agree (4), Completely disagree (5), Do not know (99).
	Convenience of buying online	How much would you agree with that “convenience of buying online” is accurate in regards to IKEA? Choose the alternative that most accurately describes your perception.	Completely agree (1), agree to some extent (2), Neither agree nor disagree (3), Do not agree (4), Completely disagree (5), Do not know (99).
	Convenience of buying in store	How much would you agree with that “convenience of buying in store” is accurate in regards to IKEA? Choose the alternative that most accurately describes your perception.	Completely agree (1), agree to some extent (2), Neither agree nor disagree (3), Do not agree (4), Completely disagree (5), Do not know (99).
Level of Trust (construct)	Describe IKEA as reliable	Would you describe IKEA as reliable?	No (0), yes (1)
	Describe IKEA as caring	Would you describe IKEA as caring?	No (0), yes (1)
	Describe IKEA as reliable honest	Would you describe IKEA as honest?	No (0), yes (1)
Service Orientation (single item)	Convenience of getting to the store.	How much do you think that “easy to get to the store” is accurate with IKEA?	No (0), yes (1)
Risk Aversion: Delivery (single item)	Concerns of delivery	In regards of IKEA’s product assortment and/or shopping experience, would “delivery” concern you?	No (0), yes (1)
Risk Aversion: Product	Product quality	In regards of IKEA’s product assortment and/or	No (0), yes (1)

(single item)		shopping experience, would “product quality” concern you?	
Online Aversion (single item)	Concerns that it is not possible or easy to purchase online purchase	In regards of IKEA’s product assortment and/or shopping experience, would “neither possible nor easy to buy online” concern you?	No (0), yes (1)
<b>Demographic profiling variables</b>			
Sex (single item)	Sex	Are you a...?	Man (1), woman (2).
Age (single item)	Age	To which age category do you belong?	Younger than 15 years (1), 15-19 years (2), ”...”, 75-80 years (14), older than 81 years (15), prefer to not say (98).
Education (single item)	Education	What is your highest received educational degree?	Primary school (1), Seconday School (2), University/College (3), Don’t know (4)
Income (single item)	Income	To which income group does your household belong to regarding the yearly income (before tax)?	Low (1), Medium (2), High (3), Refused (4)
Living Situation (construct)	The living situation historical group	Living situation historical group	Living single starting out (1), Living single established (2), Living together starting out (3), living together established (4)
	The situation layer 1, if people live with children or not	How many persons are living in your home? (do not include yourself)	Living with children (1), Not living with children (2), Undefined (3)
<b>Multichannel Clustering Variables for the New Multichannel Segmentation Concept</b>			
Online/offline Channel Preference	Online/offline channel preference	Do you usually prefer to purchase online or in the store when you shop furniture?	Prefer to buy in store (0), prefer to buy online (1), do not know (2)
Offline Channel Selection	Offline channel selection	When did you last buy from an IKEA store?	I have never bought furniture from the store (1), More than 5 years ago (2), Between 2 and 5 years ago (3), Between 1 and 2 years ago (4), Between 6 and 12 months ago (5), Between 3 and 6 months ago (6), Between 1 and 3 months ago (7), Within the past month (8), Don’t know (9)
Online Channel Selection	Online channel selection	When did you last buy from the IKEA website?	I have never bought furniture online (1), More than 5 years ago (2), Between 2 and 5 years ago (3),

			Between 1 and 2 years ago (4), Between 6 and 12 months ago (5), Between 3 and 6 months ago (6), Between 1 and 3 months ago (7), Within the past month (8), Don't know (9)
<b>Demographic Clustering Variables (IKEA's traditional segmentation)</b>			
Living Situation (construct)	The living situation historical group	Living situation historical group	Living single starting out (1), Living single established (2), Living together starting out (3), living together established (4)
	The situation layer 1, if people live with children or not	Living situation layer 1	Living with children (1), Not living with children (2), Undefined (3)
<b>Marketing Parameters for Comparing the Segmentations</b>			
Customer Retention	Intention to buy again from IKEA	When buying furniture again, how likely is it that you choose IKEA?	10-point Likert scale with not likely at all at (1) and very likely at (10), Don't know (99)
Brand Awareness	Brand awareness of IKEA	How aware are you of IKEA as a brand?	Not aware (1), Heard of, but know very little about (2), Know a little about (3), Know quite well (4), Know very well (5), Don't know (6)
Customer Loyalty	Recommend IKEA	Would you recommend IKEA to a friend or colleague?	I would recommend IKEA (1), I would recommend IKEA as a first choice, but also recommend others (2), I would recommend IKEA equally with others (3), I would recommend others first, but tell them to consider IKEA (4), I would not recommend IKEA (5), Don't know (6)
Sales Volume	Amount of money spent at IKEA	How much did you lastly spend at IKEA?	Low (1), Medium (2), High (3), Nothing (4)
Likelihood of Purchase	Likelihood of purchase to buy from IKEA instead of buying at any competitor	How likely is it that you would purchase at IKEA instead of any competitor?	IKEA > Competitors (1), Ikea = Competitors (2), IKEA < Competitors (3), Don't know (4)

## Appendix B

### *ANOVA output for the multichannel segmentation model*

Variables/ Constructs		Uninvolved Offliners	Ambiguous Onliners	Strict Offliners	Ambiguous Offliners	Sig.
Customer Retention	Mean (SD)	8,62 (2,33)	8,73 (2,26)	9,1 (1,87)	9,13 (1,98)	0,000
	Sig. of differences to other clusters	Cl. 2: n.s. Cl. 3: 0,000 Cl. 4: 0,000	Cl. 1: n.s. Cl. 3: 0,017 Cl. 4: 0,033	Cl. 1: 0,000 Cl. 2: 0,017 Cl. 4: n.s.	Cl. 1: 0,000 Cl. 2: 0,033 Cl. 3: n.s.	
Brand Awareness	Mean (SD)	4,66 (0,48)	4,52 (0,63)	4,79 (0,41)	4,78 (0,47)	0,019
	Sig. of differences to other clusters	Cl. 2: n.s. Cl. 3: n.s. Cl. 4: n.s.	Cl. 1: n.s. Cl. 3: 0,036 Cl. 4: n.s.	Cl. 1: n.s. Cl. 2: 0,036 Cl. 4: n.s.	Cl. 1: n.s. Cl. 2: n.s. Cl. 3: n.s.	
Customer Loyalty	Mean (SD)	2,3 (0,82)	2,95 (1,42)	2,12 (0,78)	2,1 (0,96)	0,000
	Sig. of differences to other clusters	Cl. 2: 0,003 Cl. 3: n.s. Cl. 4: n.s.	Cl. 1: 0,003 Cl. 3: 0,000 Cl. 4: 0,001	Cl. 1: n.s. Cl. 2: 0,000 Cl. 4: n.s.	Cl. 1: n.s. Cl. 2: 0,001 Cl. 3: n.s.	
Sales Volume	Mean (SD)	2,79 (1,26)	2,73 (1,14)	2,18 (0,67)	2,35 (0,82)	0,000
	Sig. of differences to other clusters	Cl. 2: n.s. Cl. 3: 0,000 Cl. 4: 0,000	Cl. 1: n.s. Cl. 3: 0,000 Cl. 4: 0,000	Cl. 1: 0,000 Cl. 2: 0,000 Cl. 4: 0,016	Cl. 1: 0,000 Cl. 2: 0,000 Cl. 3: 0,016	
Likelihood of Purchase	Mean (SD)	1,95 (0,98)	2,11 (1,01)	1,64 (0,85)	1,72 (0,89)	0,000
	Sig. of differences to other clusters	Cl. 2: 0,021 Cl. 3: 0,000 Cl. 4: 0,000	Cl. 1: 0,021 Cl. 3: 0,000 Cl. 4: 0,000	Cl. 1: 0,000 Cl. 2: 0,000 Cl. 4: n.s.	Cl. 1: 0,000 Cl. 2: 0,000 Cl. 3: n.s.	

*ANOVA output for the demographic segmentation model*

Variables/ Constructs		Living Alone	Living Together	Living with Children	Sig.
Customer Retention	Mean (SD)	8,82 (2,4)	8,76 (2,33)	8,95 (2,38)	n.s.
Brand Awareness	Mean (SD)	4,43 (0,78)	4,58 (0,65)	4,71 (0,56)	0,001
	Sig. of differences to other clusters	2.: n.s. 3.: 0,001	1.: n.s. 3.: n.s.	1.: 0,001 2.: n.s.	
Customer Loyalty	Mean (SD)	2,52 (1,17)	2,44 (1,15)	2,22 (0,96)	n.s.
Sales Volume	Mean (SD)	2,78 (1,22)	2,63 (1,11)	2,64 (1)	0,000
	Sig. of differences to other clusters	2.: 0,000 3.: 0,003	1.: 0,000 3.: n.s.	1.: 0,003 2.: n.s.	
Likelihood of Purchase	Mean (SD)	2,07 (1,07)	2 (1,01)	2 (1,06)	0,028
	Sig. of differences to other clusters	2.: 0,047 3.: n.s.	1.: 0,047 3.: n.s.	1.: n.s. 2.: n.s.	

## Appendix C

*Mean values and average differences between segments for performance measurements  
(multichannel segmentation model)*

	Mean values of Segments				Differences between Segments						Average Difference
	Uninvolved Offliners (1)	Ambiguous Onliners (2)	Strict Offliners (3)	Ambiguous Offliners (4)	1 – 2	1 – 3	1 – 4	2 – 3	2 – 4	3 – 4	
Customer Retention	8,62	8,73	9,1	9,13	0,11	0,48	0,51	0,37	0,4	0,03	0,317
Brand Awareness	4,66	4,52	4,79	4,78	0,14	0,13	0,12	0,27	0,26	0,01	0,155
Customer loyalty	2,3	2,95	2,12	2,1	0,65	0,18	0,2	0,83	0,85	0,02	0,455
Sales Volume	2,79	2,73	2,18	2,35	0,06	0,61	0,44	0,55	0,38	0,17	0,368
Likelihood of Purchase	1,95	2,11	1,64	1,72	0,16	0,31	0,23	0,47	0,39	0,08	0,273

*Mean values and average differences between segments for performance measurements (demographic segmentation model)*

	Mean values of Segments			Differences between Segments			Average Difference
	Living alone (1)	Living together (2)	Living with children (3)	1 - 2	1 - 3	2 - 3	
Customer Retention	n.s.	n.s.	n.s.				
Brand Awareness	4,43	4,58	4,71	0,15	0,28	0,13	0,187
Customer loyalty	n.s.	n.s.	n.s.				
Sales Volume	2,78	2,63	2,64	0,15	0,14	0,01	0,1
Likelihood of Purchase	2,07	2	2	0,07	0,07	0	0,047