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# What Factors Contribute to Sales of Groceries Online?

*A quantitative study of Swedish urban consumers*

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## **Abstract**

<b>Title</b>	What Factors Contribute to Sales of Groceries Online? – A quantitative study of Swedish urban customers.
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<b>Authors</b>	Kristina Carlsson & Amanda Larsson
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<b>Keywords</b>	Grocery, Online, Retail, Actual Purchases, Sweden, Sales, Factors.
<b>Purpose</b>	The aim with this study is to investigate what factors contribute to Actual Purchases of online groceries.
<b>Methodology</b>	The study is based on a quantitative research strategy and a deductive process, which allowed the creation of hypotheses. The data was collected through a web survey, where the respondents answered questions according to a five-point Likert scale. The web survey was distributed to 7597 customers of Coop Online, whereof 896 responses were collected. This provided a response rate of 11,8%.
<b>Theoretical perspective</b>	The study is based on the theories of Marimon et al. (2009) and Boyer & Hult (2005). The study aims at finding relevant aspects that consumers regard as important, influencing their Perceived Value of an online grocery store and further their Actual Purchases from that store. The theory is complemented with a review of two additional concepts adopted from Boyer & Hult (2005), Service Quality and Product Quality.
<b>Empirical foundation</b>	Our empirical data are based on structured web surveys. The questionnaire was answered by respondents who were customers of the Swedish online grocery store, Coop Online.
<b>Conclusions</b>	We found that the model by Marimon et al. (2009) should be complemented with two concepts from Boyer & Hult (2005). When adding the concepts Service Quality and Product Quality to the model by Marimon et al. (2009), the model could better explain customers Perceived Value. Furthermore, we found a positive correlation between Perceived Value and Loyalty and between Loyalty and Actual Purchases.

## **Foreword**

This thesis was written in the Business Administration faculty at Lund University during the spring semester of 2014. The thesis is our final project in Marketing at the Master's level and we believe that the project has been valuable in the way that it has deepened our knowledge in the selected research field. Furthermore, we have found that our research regards a rather unexplored field and thereby we hope that we can offer valuable insights. The aim is to contribute with knowledge regarding what factors contributes to actual purchases for Swedish urban customers buying groceries online.

We would like to take the opportunity to thank all of the respondents answering our survey. The answers laid the foundation for the analysis and without them the research would not have become as successful. We are very thankful for the help with distribution of the surveys that was carried out by Coop Online. Furthermore, we would like to thank Kayhan Tajeddini for valuable advice concerning our quantitative analysis. Finally, we would like to offer our deepest gratitude to Jens Hultman for being an extraordinary supervisor who has helped us complete the thesis in the best way possible.

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# 1. INTRODUCTION

## 1.1 Problem Discussion

The Internet has today taken a natural part in the everyday life of Swedish consumers (Finndahl, 2013). No stationary computer is needed when information is accessible through a smartphone, small enough to fit in a pocket. However, easy and increased access to the Internet creates both new threats and opportunities for retailers. Traditional retailers, operating in offline environments takes on multichannel strategies, trying to incorporate online activities alongside their offline business (Ko & Roztocky, 2009). At the same time, an increase in retailers that are solely in the online markets offers competition. For both, strategies on how to efficiently reach online retailing success must be formulated. Knowing what factors are important for consumers when assessing products and services online is of great importance in order to make appropriate strategic considerations.

Today, Swedish consumers can enjoy the benefits of ordering products and services from several different categories. 85% of the Internet users in Sweden have ordered or paid for goods or services online in 2013, which can be compared to 34% in 2003 (Finndahl, 2013). The most well established categories that these online customers order from are currently the home electronics and the fashion sector. However, in accordance with an increase in knowledge and extensive adaptation to online shopping, Svensk Distanshandel (2013) believes that the ratio of online sales for companies within other product and service categories will increase.

The online grocery market has had a steady growth during the last couple of years. In 2010, 9% of Swedish consumers had ordered groceries online compared with 17% in year 2013 (Svensk Distanshandel, 2013). However, when looking at the Swedish grocery market, it is still considered to be in its early stages of development (Svensk Distanshandel, 2013). Many companies have opened up their businesses in full scale to private consumers in the past 4 – 5 years. Comparing the online grocery market to the entire grocery industry in Sweden, the online market only accounts for 1.9-2.6 billion SEK of the total grocery industry's turnover of 250 billion SEK in 2013. Even if the online grocery sales only accounts for 1% of the total industry, a comparison to the previous year's turnover (1.5-2 billion SEK) concludes an increase of 30% (Svensk Distanshandel, 2013). Furthermore, Svensk Distanshandel (2013) argues that younger generations recognize the convenience aspect of buying goods and services online. Thus, they do not have as high of a barrier towards ordering their groceries online as previous generations. Svensk Distanshandel (2013) further argues that other groups within society, as for example elderly and handicap able, might also benefit from the convenience aspect of getting groceries home delivered.

The growth has during the last fifteen years inspired research about "e-groceries"; how retailers should approach strategy when selling groceries online. As ordering groceries online has become more common, the amount and depth of the research has increased.

A lot of research has been carried out concerning how to run successful online retailing, regardless of industry. One example is Parasuraman, Zeithaml & Malhotra (2005) who studied what factors contributed to online business success. Marimon et al. (2009) later applied this model on the online grocery market. In accordance with Parasuraman, Zeithaml & Malhotra (2005), Marimon et al. (2009) identified four different concepts (*Efficiency, System Availability, Fulfillment, Privacy*) leading to Perceived Value for the customer. Furthermore, the researchers also found a positive relationship between Perceived Value and Loyalty. In contrast to Parasuraman, Zeithaml & Malhotra (2005), Marimon et al. (2009) decided to investigate Loyalty's effect on Actual Purchases instead of Purchase Intentions. Measuring Actual Purchases was argued as a better way to

measure business success since it is based on reality instead of imagined behavioral intentions (Marimon et al., 2009).

In accordance with Marimon et al. (2009), Boyer & Hult (2005) also investigated what led to success when retailing with groceries online. In addition, Boyer & Hult (2005) found *Service Quality* and *Product Quality* to be important concepts behind creating success. Other researchers that emphasized the importance of Service Quality were Wolfinbarger & Gilly (2003). Parasuraman, Zeithaml & Malhotra (2005) also believed that Service Quality was important and developed an additional scale measuring customer service online.

The other aspect absent in the research by Marimon et al. (2009), Product Quality, many researchers have found to be of great importance for customers ordering groceries online. The importance of Product Quality has been described by Rasmus & Nielsen (2005) who argued that a wide product range and fresh products is crucial for delivering value to consumers. The importance of Product Quality is further emphasized by Boyer & Hult (2006).

The Service and Product Quality aspects can thereby be argued to be of great importance for further investigation. Thus, we will add these two concepts to the model by Marimon et al. (2009) who did not include them in their research. By adding these two concepts, the aim is to provide a deeper understanding regarding what factors contribute to successful online grocery retailing, measured through Actual Purchases.

The range of research available made with Swedish consumers is limited. Research concerning how Swedish consumers assess different offerings online should be of interest since Swedes are one of the most frequent Internet-users in the world (Finndahl, 2013). It could be argued that the research by Marimon et al. (2009) is no longer as accurate nor applicable for Sweden, since it was carried out in Spain five years ago. The cultural differences, the technological growth and Internet penetration in Sweden during the last five years, states an obvious reason to why the model should be tested again, based on these new conditions. Furthermore, it will be tested together with the two added dimensions from Boyer & Hult (2005).

## 1.2 Research Aim

*The aim with this study is to investigate what factors contribute to Actual Purchases of online groceries.*



## 2. THEORY

*The theoretical chapter is introduced with a literature review where different researches are problematized. Subsequently the studies relevant for this research are presented. Finally, summaries of the theoretical main points are presented along with the theoretical framework and the hypotheses.*

### 2.1. Introduction

The rise of the Internet and the expansion of online businesses have changed the conditions of the market place (Wolfenbarger & Gilly, 2003). Increased Internet usage has inspired a vast amount of research in the field of electronic business, in this study so called “e-retailing”. At the same time, companies are increasingly trying to develop their businesses through the web (Zhu et al., 2004). However, some companies still face difficulties. Barua et al. (2004) argue that even if many companies are incorporating e-retailing into their traditional business models, they are incapable of delivering a superior value to their customers. One difficulty that retail managers are concerned with is how the online setting affects customers (Shankar et al., 2003). Lacking knowledge within online customer behavior subsequently affects the opportunities to achieve online business success (Shankar et al., 2003).

According to Thamizhvanan & Xavier (2012) increased Internet usage has brought along new opportunities as well as challenges for retailers. It is therefore crucial, according to Barua et al. (2004), to explore what constructs a superior business model that delivers high customer satisfaction. Additional attention needs to be paid to understand customer behavior and satisfaction, which allows improvements in the operational and financial business performances (Barua et al., 2004). This is also emphasized by Torkazadeh & Dhillon (2002) who argue that the better correlation between the customer’s initial beliefs and perceptions with their actual perceived value, the more comprehensive the e-retail success will be. Subsequently, a lot of researches have been dedicated to locate what factors contribute to e-retail success (Zhu et al., 2004).

### 2.2 Previous Research

#### 2.2.1 How to create e-retail success regardless of industry

In the literature review presented in this section, three concepts; Service Quality, Loyalty and Customer Value & Experience have been found to be recurring themes of what constitutes e-retailing success. Thereby, they should all be considered to be important when measuring success. Even if these themes are the major and most recurrent themes when assessing online businesses, other minor concepts have been identified but have been excluded in this research. The reason to this is that they have not been as recurrent and discussed as the others and might thereby not be as established as the major themes discussed in this theoretical chapter. Furthermore, these concepts might discuss more specific and detailed situations than what is within the scope of our research aim.

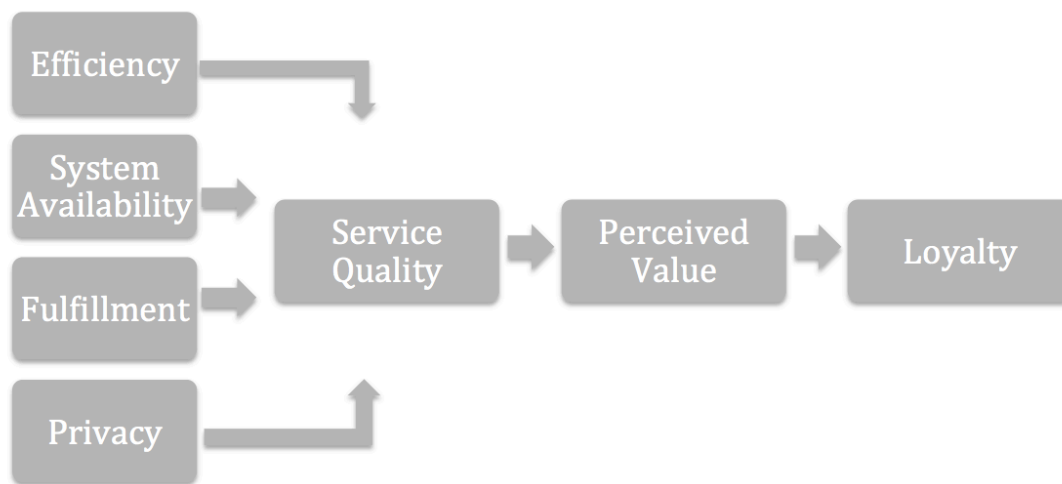
##### 2.2.1.1 Service Quality

Since the 1980’s, it has been acknowledged that delivering exceptional service is crucial for business success or even business survival (Thompson et al., 1985 in Parasuraman, 1988). In the past, attempts have been made to find out how to best measure Service Quality for offline businesses (Parasuraman, Zeithaml & Berry, 1988). The most cited and renowned study in the offline retail context stem from Parasuraman, Zeithaml & Berry (1988) who developed the well-known SERVQUAL scale. The SERVQUAL instrument was created to help retail organizations assess consumer perceptions and expectations of service quality. Its purpose is to enable managers of retail organizations

to locate areas within the service area that are in need of improvement, but also to increase the attention of service quality as such, and to determine its essentiality (Parasuraman, Zeithaml & Berry, 1988). The SERVQUAL-model was during the time developed for offline retail organizations; organizations which today are being challenged by the rapid growth of online transactions.

For online businesses, many researchers claim that Service Quality is the most important concept behind success (Zeithaml, Parasuraman & Malhotra, 2002). Although, back in 2002, Zeithaml, Parasuraman & Malhotra (2002) argued that there was insufficient research about what actually conceptualizes and how Service Quality should be measured in an online setting. Thus, more research about online settings has been developed since.

The most cited and established model within the field of online Service Quality, is the so called E-S-QUAL- model from Parasuraman, Zeithaml & Malhotra (2005), which originates from the SERVQUAL instrument (Zeithaml, Parasuraman & Malhotra, 2002). Parasuraman, Zeithaml & Malhotra (2005) argue that measuring Service Quality of the website is the most efficient way to establish business success online. In addition to measuring Service Quality, the E-S-QUAL measurement also examines two other concepts leading to online business success, Perceived Value and Loyalty Intentions. These three concepts are together determinants behind business success online. The Service Quality concept consists of four different factors; Efficiency, System Availability, Fulfillment and Privacy. All four of them were shown to have a significant positive effect not only on Service Quality but also on Perceived Value and Loyalty Intentions.



**Figure 1 - E-S-QUAL model by Parasuraman, Zeithaml & Malhotra (2005)**

However, the authors experienced an absence in the factors from the Service Quality concept that examined personal service. Therefore a supplementary scale (E-RecS-QUAL) was developed, which only was used for customers who had run into problems or questions. The customer service area is thereby important for Parasuraman, Zeithaml & Malhotra (2005) and is something they highlight as an important factor behind business success. Parasuraman, Zeithaml and Malhotra (2005) finally concluded that the E-S-QUAL and the E-RecS-QUAL scales should be used in tandem to best obtain an overall assessment of a website's service quality.

Wolfenbarger & Gilly (2003) have developed another scale for measuring website quality; the eTailQ model. Business success is measured in similar ways by Wolfenbarger & Gilly (2003) and Parasuraman, Zeithaml & Malhotra (2005); through Overall Quality,

Satisfaction and Loyalty. Just like Parasuraman, Zeithaml & Malhotra (2005), Wolfinbarger & Gilly (2003) argue that the quality of a website is explained by four factors; Fulfilment/Reliability, Website Design, Privacy/Security and Customer Service. Parasuraman, Zeithaml & Malhotra (2005) found all factors to be significant, while Wolfinbarger & Gilly (2003) did not find the Security/Privacy factor to be significant. Another important finding is that Wolfinbarger & Gilly (2003) included a Customer Service factor, which corresponds to the E-RecS-QUAL scale, which Parasuraman, Zeithaml & Malhotra (2005) argued is important to assess in addition to their E-S-QUAL model. The Customer Service factor should therefore be seen as an important factor to include appropriately, according to the both researchers. Concerning what factor was found to be the most important explaining Service Quality, both researches got the same results; the Quality/Efficiency of the website.

Collier & Beinstock (2006) have expressed an appreciation of the two measurements scales, E-S-QUAL and E-RecS-QUAL from Parasuraman, Zeithaml & Malhotra (2005). They consider the models to be a good tool for conceptualizing Service Quality online, and like Parasuraman, Zeithaml & Malhotra (2005), they believe that the Customer Service factor is essential and must be carefully monitored. When examining the fundamental factors behind customer satisfaction, Collier & Beinstock (2006) states that; the Design, Information Accuracy, Privacy, Functionality and Ease of use of the website, all are important and significant factors. A higher level of satisfaction in these factors leads to a better experience, which consequently will affect the quality of the transaction and finally the level of Overall Satisfaction (Collier & Beinstock, 2006).

Yoo & Donthu (2001) further emphasize the Service Quality concept as an important determinant behind business success. They argue that five concepts; Overall Site Quality, Attitude Towards the Site, Online Purchase Intentions, Site Loyalty and Site Equity, together lead to online success. The model was named SITEQUAL (Yoo & Donthu, 2001). The factors Yoo & Donthu (2001) found to be the most important to achieve excellent Service Quality are; Ease of Use, Design, Speed and Security. An interesting conclusion that can be made is that Yoo & Donthu (2001), in line with Parasuraman, Zeithaml and Malhotra (2005) and Wolfinbarger & Gilly (2003), include some kind of Customer Experience and Loyalty concepts as important determinants leading to e-retail success.

Finally, many researchers, as presented above, argue that a Loyalty concept should be included among other concepts when measuring e-retail success. Although, other researchers argue that Loyalty is the most important and strongest concept of them all, as will be presented in the next section.

### **2.2.1.2 Loyalty**

Loyalty has for long been an established term and a business goal for offline retail organizations (Reicheld & Schefter, 2000). According to Reicheld & Schefter (2000), loyalty is the key to success not only for offline businesses but also for online businesses. Earning trust from the right kind of customers while delivering superior customer experience is of great importance (Reicheld & Schefter, 2000). Succeeding with creating trust, customers will have an increased willingness to do future business with you. Reicheld & Schefter (2000) further argue that without loyal customers, even the most planned and innovative business model will collapse.

Other researchers who have embraced the importance of loyalty are Srinivasan, Anderson & Ponnayolu (2002). With loyalty, Srinivasan, Anderson & Ponnayolu (2002) refers to customers with a repeating buying behavior that stems from a favorable attitude towards the company. The authors, in line with Reicheld & Schefter (2000), argue that Loyalty should be measured through Word of Mouth and Willingness to Pay a

Price Premium, which eventually will affect Behavioral Outcomes and consequently the profitability of the business. Srinivasan, Anderson & Ponnaveolu (2002) further emphasize the importance of including both attitudinal and behavioral items when measuring Loyalty, since it is important to distinguish between true and spurious loyalty, the latter, which can occur when there is a lack of available alternatives for the consumer (Srinivasan, Anderson & Ponnaveolu, 2002). From their research, eight factors which they refer to as “the 8 C’s” were presented; Customization, Contact interactivity, Cultivation, Care, Community, Choice, Convenience and Character. Of these, all were found to be significant but Convenience, and were identified to be important determinants behind customer Loyalty and e-retail success.

According to Bhattacharjee (2001), retailers can save a lot of money and resources by investigating their customer satisfaction and retention rate, utilizing their CRM-data. By having pleased and returning customers, the companies will increase the opportunities for positive Word of Mouth. At the same time a lot of money and resources can be saved by not having to attract new customers, which is often very expensive. Bhattacharjee (2001) identified four different factors that lead to Loyalty, which he acknowledged to be the ultimate goal for achieving online business success. By delivering exceptional service in terms of sales, service and marketing, which corresponds to the initial expectations of the customer, the customer will feel more satisfied. Furthermore, the customer will experience a higher perceived usefulness of interacting with the company, which subsequently will lead to a continuing intention to buy and to finally be a loyal customer. Thus, Confirmation, Satisfaction, Perceived Usefulness and Continuance Intention together will lead to Loyalty (Bhattacharjee, 2001).

In accordance with Bhattacharjee (2001), Yang & Peterson (2004) identified Customer Satisfaction and Perceived Value as important factors leading to Loyalty. Furthermore, Yang & Peterson (2004) also identifies Loyalty as the most central concept for businesses to work with when striving to be successful online. Like Bhattacharjee (2001), Yang & Peterson (2004) argue that except spreading valuable positive Word of Mouth, loyal customers also tend to bring large revenues over time since they are less price sensitive. In order to increase customer satisfaction, a company must offer high value in their product and service offerings. In addition to being professional when delivering needed and required service, they should also offer differentiated and suitable products, along with what is being requested from target customers. Furthermore, it is important for online operating businesses to make sure that their website is easy to use, but is also safe in terms of customer security and privacy. Trust is thereby a factor that is crucial to consider when operating in an online setting (Yang & Peterson, 2004). Finally, companies must ensure that the offer given corresponds to what the customer initially expects in order to make sure that the perceived value is positive.

### ***2.2.1.3 Customer Value & Experience***

A common way of measuring Customer Value and Customer Experience is by investigating customers Behavioral Intentions. Cronin, Brady & Hult (2000) argue that the perceived level of the service quality delivered by the company provides the customer with a certain value, which moreover reflects the Customer Satisfaction. The more satisfied the customer is, the more positive his or her Behavioral Intentions will be. Cronin, Brady & Hult (2000) define Behavioral Intentions as a combination of five different factors; the customers say positive things about the company, the customer recommend the company, the customer remains loyal to the company, the customer is willing to spend more money on product and services from the company and finally the customer has a higher willingness to pay price premiums for the products and services supplied by the company. Consequently, the definition stated by Cronin, Brady & Hult (2000) argue that Behavioral Intentions is a relatively broad and comprehensive term when measuring e-retail success.

Different researchers have tried to identify what factors leading to e-retailing success, measuring Customer Values and Experiences. As mentioned by Torkazadeh & Dhillon (2002), it is important for online businesses to ensure that the perceived value that the customers feel corresponds to their initial beliefs and perceptions. If their initial thoughts are consistent with the actual outcome, the success will be greater. Getting a clear understanding of the customer's preferences is therefore essential when striving to be successful online (Torkazadeh & Dhillon, 2002).

Purchase Intentions is another possible way to measure e-retail success (Thamizhvanan & Xavier, 2013). In their research, the aim was to identify different factors leading to Customer Purchase Intentions. The customer's Impulse Purchase Orientation and Prior Online Purchase Experience were two factors found to be important. One remarkable finding the authors concluded was that Trust was the most important factor, which to the largest extent contributed and affected the consumer's Purchase Intention (Thamizhvanan & Xavier, 2013).

Szymanski & Hise (2000) have formulated e-Satisfaction as the fundamental determinant behind e-retail success. The model consists of three crucial elements; Financial Security, Convenience and Site Design. Financial Security expressed the consumer's feelings of trust, which is strengthened by Thamizhvanan & Xavier (2013) who found the Trust factor to be an important determinant. Finally, Financial Security, Convenience and Site Design were all found to have strong correlation to e-retail success.

#### ***2.2.1.4 Service Quality, Loyalty and Customer Value & Experience - The interaction***

Even if many researchers presented above argue that different measurements and conceptualization of business success should be utilized, an interesting point should be made. The majority of the researchers who have constituted Service Quality as an important factor, have in addition included aspects of Loyalty and Customer Value in one way or another (Wolfenbarger & Gilly, 2003, Parasuraman, Ziethaml & Malhotra, 2005, Yoo & Donthu, 2001).

It is furthermore noticeable that many of the factors behind what constitutes e-retail success are recurrent under the separate parts. For example, Yoo & Donthu (2001) in the Service Quality section, in accordance with Szymanski & Hise (2000) in the Customer Value & Experience section, both highlight the importance of Site Design.

Another important aspect to keep in mind is Privacy. Both Yang & Peterson (2004), presented in the Loyalty section and Collier & Beinstock (2006), presented in the Service Quality section, believe that the factor Privacy is crucial for business success.

Finally, Trust is something that several authors believe is important. The factor has been emphasized by both Szymanski & Hise (2000), presented in the Customer Value & Experience section as well as by Reicheld & Schefter (2000), presented in the Loyalty section.

As been concluded in this section, many researchers' beliefs of what constitutes business success are interconnected. To give an overview of how the researchers are related, Table 1 is presented on the next page.

Author(s)	What was measured?	Through what concepts?	What concepts had a significant effect?	Method	Model name
Parasuraman, Zeithaml & Malhotra (2005)	Service Quality of Websites; E-SQUAL, Perceived Value, Loyalty Intentions	Efficiency, System Availability, Fulfillment, Privacy	ALL	Quantitative analysis; Online Survey	E-SQUAL & E-Recs-QUAL
Wolfinger & Gilly (2003)	Quality; Customer Satisfaction, Retention, Loyalty	Web Site Design, Fulfillment/Reliability, Privacy/Security, Customer Service	All but Privacy/Security	Quantitative & Qualitative analysis; Focus groups, Online Survey	eTailQ
Collier & Beinstock (2006)	Service Quality/ Customer Satisfaction	Design, Information Accuracy, Privacy, Functionality, Ease of use of the web site	ALL	Quantitative analysis; Survey	-
Yoo & Donthu (2001)	Overall Site Quality; Attitude Toward Site, Online Purchase Intentions, Site Loyalty, Site Equity	Ease of use, Design, Speed, Security	ALL	Quantitative analysis; Online Survey	SITEQUAL
Reicheld & Scheffer (2000)	Loyalty; Trust, Word of Mouth, Willingness to Recommend, Repeated Purchases	Quality Customer Support, On-time Delivery, Compelling Product Presentations, Shipping, Handling, Privacy	ALL	Qualitative analysis; Reflection.	-
Srinivasan, Anderson & Ponnavaolu (2002)	Customer Loyalty	Customization, Contact Interactivity, Care, Community, Convenience, Cultivation, Choice, Character (8 c's)	All but Convenience	Quantitative analysis; Online Survey	-
Bhattacharjee (2001)	Loyalty; CRM	Confirmation, Satisfaction, Perceived Usefulness, Continuance Intention	ALL	Quantitative analysis; Online Survey	-
Yang & Peterson (2004)	Loyalty; Customer Satisfaction, Perceived Value	High Valued Products, Targeted Products, User Friendly Website, Trust (Security & Privacy)	ALL	Quantitative analysis; Online Survey	-
Cronin, Brady & Hult, T. (2000)	Behavioral Intentions	Say Positive Things, Willingness to Recommend, Loyalty, Spend More With the Company, Pay Price Premiums	ALL	Quantitative analysis; Online Survey	-
Torkzadeh & Dhillon (2002)	Customer Value	Internet Shopping Convenience, Internet Ecology, Internet Customer Relation, Internet Product Value	ALL	Quantitative analysis; Online Survey	-
Thamizhvanan & Xavier (2013)	Customers Online Purchase Intentions	Impulse Purchase Orientation, Brand Orientation, Quality Orientation, Prior Online Purchase Experience, Online Trust	Impulse Purchase Orientation, Prior Online Purchase Experience, Online Trust	Quantitative analysis; Online Survey	-
Szymanski & Hise (2000)	e-Satisfaction	Convenience, Merchandising, Site Design, Financial Security	All but Merchandising	Quantitative & Qualitative analysis; Focus Groups, Online Survey	-

Table 1 - Overview of research within online businesses

## **2.2.2 How to create e-retail success within the grocery industry**

In the literature review concerning the online grocery market, research findings have been divided into four different parts; User-friendly Online Store, Behavioral Intentions, Logistics and Targeting Customers & Situational Factors. The research area of online businesses within the grocery industry is a rather complex area with many different orientations. Thereby, the division has been made on the grounds of the common themes and similarities that the researches have rather than on the grounds of differences. The studies are all aimed at explaining what leads to e-retail success within the grocery industry but argue that there are different routes to reaching this goal. Thereby, the different parts have different focus on what the most important focal point is for achieving business success.

### **2.2.2.1 User-friendly Online Store**

Vrechopoulos et al. (2004) investigated the effect of visual layout of online stores. The researchers found that the visual layout has a critical effect on traffic and sales, which increases the willingness to buy and finally the success of the e-retail. Consequently, it is of great value for retailers to be aware of what visual layout is preferred by their customers. Different product categories might yield different layouts at the same time as brand image also effects what visual layout strategy should be considered.

Degeratu, Rangaswamy & Wu (2000) also investigated the effect of visual layout but further studied the differences of consumer choice in online and offline supermarkets where the effect of Brand Name, Price and Other Search Attributes was measured. The research concluded that consumers had less willingness to switch between different online grocery stores than between offline grocery stores. However, the researchers focused on the importance of a user-friendly website as a tool for creating e-retail success which can be considered to be very similar to what Vrechopoulos et al. (2004) investigated. The researchers concluded that the online grocery ordering consumer tends to put preferred products on a "virtual shopping-list", which is saved and used for repeat purchases later on. Thus, it might be harder to launch new products online since the barrier to replace a product on the virtual shopping-list is higher. Degeratu, Rangaswamy & Wu (2000) finally concludes that the offer given to the online grocery customer should include a combination of a good price and promotion.

### **2.2.2.2 Behavioral Intentions**

Hansen, Jensen & Solgaard (2004) tested the traditional consumer theory of reasoned action and the theory of planned behavior in the online grocery retail market. Their findings showed that the system availability, how easy online grocery ordering fits with the consumers everyday life and how people in their social environment perceive online grocery ordering has a great effect on consumers Behavioral Intentions. Behavioral Intention in this case concerns the Intention to Purchase from an online grocery store within the near future and thereby has an effect on the success of the business (Hansen, Jensen & Solgaard, 2004).

Hansen (2008) further developed the research by Hansen, Jensen & Solgaard (2004). By creating a new model with two additional concepts, explaining consumers Purchase Intentions, he found that a conservative attitude towards online grocery shopping has a negative effect on the Intention to Purchase. At the same time, the willingness to increase ones self-enhancement has a positive effect on the Intention to Purchase. This means that the consumer's personal attitude towards online grocery shopping and how consumers want to position themselves in a social setting plays an important role in the consumer's intention to buy.

### **2.2.2.3 Logistics**

Murphy (2003) concludes that to be successful in selling groceries online, focus should lie in the logistics of the business. Murphy (2003) argues that being able to handle picking, packing and delivery of the groceries efficiently is the key to e-retailing success. Saving space and time is the number one goal for both the retailer and consumer. Consequently, decisions regarding store-based solutions or warehouse solutions in the logistical chain should be taken into account (Murphy, 2003).

Like Murphy (2003), Boyer & Hult (2006) investigated logistical considerations. However, Boyer & Hult (2006) decided to make a two-part study that first investigated the differences in using a distribution center compared to a store-based. Murphy (2003) also emphasized this by believing that making active decisions regarding warehouse or store-based solutions should be taken into account.

The second step was to further develop the model by Boyer & Hult (2005) (presented in 2.2 Our Theoretical Framework) to see if other concepts should be included. This time, the existing Service Quality and Product Quality concepts from the 2005-model were tested together with the added concepts; Product Freshness and Time Savings. In this new model all concepts showed to have a significant impact on behavioral intentions (Intentions to Purchase).

### **2.2.2.4 Targeting Customers and Situational Factors**

In-depth focus group research carried out by Rasmus & Nielsen (2005) outlined what factors of buying groceries online were the most important for consumers and thereby what affects online retail success. Rasmus & Nielsen (2005) argues that how the consumers prioritize the factors has to do with their current civil status. The factors that Rasmus & Nielsen (2005) found to be positive when shopping groceries online were; Offering Convenience, a Wide Product Range, Good Prices and the Idea That Products Might be Fresher Than in Traditional Stores (if delivered from a distribution center). Factors respondents felt were in need of improvement were: Policies and Ease of returning goods, Worries about missing out on bargains in conventional stores, Concerns about broken goods during delivery, The fun social aspect of going to the store and finally the Online payment system. As Rasmus & Nielsen (2005) states, how consumers prioritized the factors might be different according to what civil status they currently have. Hence, they suggested that more research should be made about the effect of situational factors.

In accordance with this, Hand et al. (2009) looked at the influence of situational factors on the willingness to buy groceries online. In addition to the two most important aspects of buying online, Convenience and Flexibility, situational factors were determinants for two out of three respondent groups. The situational factors were circumstances like; the respondents had been injured, had small children or had to help old parents with grocery shopping. According to Hand et al. (2009) the willingness to buy online is thereby dependent on the situational factor, which at any time can change. Thereby, it is of great importance for the retailer to deliver additional value that the consumer would not want to miss out on by going back to the offline grocery store. This even if his or her situational factor has changed and they are not as much in need and dependent on the convenience and flexibility. Finally, by targeting marketing to consumers in specific situations where they are in much need of convenience and flexibility (like advertising in magazines for new parents) retailers are able to hook the consumer with an additional value. According to Hand et al. (2009) the goal is to keep the customer loyal, even after the situational factor has changed, which in turn should lead to online business success.

Boyer & Frohlich (2006) do not use the term “situational factors” but investigates how different groupings of consumers in online grocery retailing assess different aspects of



the business. A study of five different consumer groups with different attitudes and experience of online shopping were compared. Among other findings, the research provides results that price sensitive customers are the least valuable to do business with, while convenience sensitive customers are the most valuable. According to Boyer & Frohlich (2006) the convenience sensitive customers are willing to pay a price premium for the convenience of getting the goods home delivered, which is the basis of the value proposition for many online grocery stores. Thus, retailers must be able to spot what customer group is the most valuable while optimizing and focusing their marketing accordingly. This is further emphasized by Hand et al. (2009) who believe that an analysis of what consumer group the target consumers belong to is important for optimizing the company's marketing.

Finally, except measuring Behavioral Intentions, Hansen (2008) did a comparison between different consumer groups, just like Boyer & Frohlich (2006). The results by Hansen (2008) showed that consumer's Internet/online shopping experience in other product or service categories had an effect on their Purchase Intentions within online grocery shopping.

#### ***2.2.2.5 Summary of e-retail research within the grocery industry***

Research concerning online grocery retailing is a rather small but complex area with a large proliferation of what factors contribute to creating e-retailing success. The different studies' similarities has been identified and compared within the sections above. However, the wide proliferation and the large differences between the sections make a further analysis of comparisons irrelevant.

A summary of the research presented above is summarized in Table 2 on the next page, providing an overview of what the different researchers believe should be the focus when creating online business success.

Author(s)	What was measured?	Through what concepts?	What concepts had a significant effect?	Method	Model name
Vrechopoulos et al. (2004)	Perceived usefulness, Ease of use, Entertainment & Time	Visual layout of webpage	Visual layout has an effect on all dependent variables	Laboratory experiment, Survey, Hypothesis testing & Quantitative analysis	Virtual store layout
Degeratu, Rangaswamy & Wu (2000)	Consumer choice based on levels of demand (service, product and internet quality)	Brand Name, Price & Other search attributes	ALL	Hypothesis & Quantitative analysis	Consumer choice behavior in online and traditional supermarkets
Hansen, Jensen & Solgaard (2004)	Behavioral intentions (purchase intentions)	System Availability, How online groceries fits in with everyday life & How online grocery shopping is perceived in the customer's social environment.	ALL	Web-based survey & Quantitative analysis	Theory of reasoned action and the theory of planned behavior
Hansen (2008)	Behavioral intentions (purchase intentions)	Same as Hansen, Jensen & Solgaard (2004) but added the consumers personal attitude towards online grocery shopping and how consumers want to position themselves in a social setting.	ALL	Hypothesis & Quantitative analysis	Customer values, the theory of planned behavior and online grocery shopping
Murphy (2003)	Fulfillment logistics (picking, packing and delivery)	Space & Time	ALL	Literature review, Interviews & Qualitative analysis	Fulfillment issues in online grocery retailing
Boyer & Hult (2006)	Behavioral intentions (purchase intentions)	Service quality, Product quality, Product freshness & Time saving	ALL	Survey, Hypothesis testing & Quantitative analysis	Customer behavioral intentions for online purchases – fulfillment method and customer experience level
Rasmus & Nielsen (2005)	Behavioral intentions (purchase intentions)	Convenience, Product Range & Price.	Negative effect: risk of receiving inferior quality groceries & The loss of the recreational aspect of grocery shopping	Focus group interviews & Qualitative analysis	Theory of planned behavior
Hand et al. (2009)	The willingness to adapt to buying groceries online	Different situational factors (as for example: having a newborn baby or being temporarily handicap able)	ALL	Exploratory qualitative research, Quantitative survey & Cluster analysis	Triggers of adaption to online grocery shopping
Boyer & Frohlich (2006)	Repeat purchasing for heterogeneous customer segments	Operational execution through: Service quality, Product quality & Internet quality	ALL	(Longitudinal research) Literature review, Survey, Hypothesis testing	Operational execution and the effect on repeat purchases

Table 2 - Overview of research within e-retail concerning e-groceries

## 2.2 Our Theoretical Framework

### 2.2.1 Application of E-S-QUAL in a grocery context by Marimon et al. (2009)

Marimon et al. (2009) decided to study whether the model E-S-QUAL created by Parasuraman et al. (2005) was applicable for a Spanish online supermarket. The E-S-QUAL model was created out of the original SERVQUAL instrument from Parasuraman et al. (1985, 1988 and 1991). The E-S-QUAL model is used to assess quality for online businesses in general. Marimon et al. (2009) was the first study that applied the E-S-QUAL model in an online grocery store setting.

Like Parasuraman, Zeithaml & Malhotra (2005), Marimon et al. (2009) decided to investigate how Efficiency, System Availability, Fulfillment and Privacy affect Perceived Value, and then how Perceived Value affected Loyalty. They further decided to add a step to the model, which investigated how Loyalty affected Actual Purchases. According to Marimon et al. (2009) previous studies have only looked at *intentions* to purchase and never at *actual sales*, which argues for a research gap. The four concepts leading to Perceived Value are considered to give an estimation of the overall website quality.

Figure 2 presents the model by Marimon et al. (2009) and is followed by a short description of each concept.

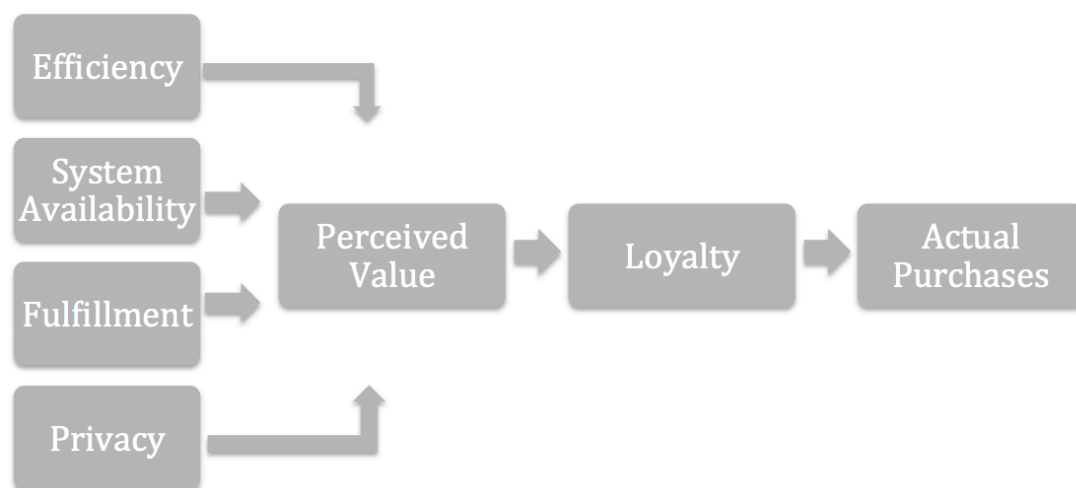


Figure 2 - Model by Marimon et al. (2009)

### ***2.2.1.1 Efficiency***

Marimon et al. (2009) were initially convinced that higher levels of ease and speed of accessing the site leads to Perceived Value for the customer. This factor concerns questions regarding user-friendliness of the site, how the information on the site is organized as well as if the site loads fast. However, in Marimon et al. (2009) this factor did not prove to have a significant effect on Perceived Value when tested in a Spanish online supermarket.

### ***2.2.1.2 System Availability***

Marimon et al. (2009) argues that higher levels of reliable technical functioning of the website leads to Perceived Value for the customer. This factor covers questions regarding the technological use of the webpage, if the site works correctly and if the site is available for business. In Marimon et al. (2009) this factor proved to have a significant effect on Perceived Value.

### ***2.2.1.3 Fulfillment***

Marimon et al. (2009) argues that higher levels of fulfillment to which the website promises about order delivery and product availability leads to Perceived Value for the customer. This factor provides questions regarding delivery, if the company delivers within a suitable timeframe, sends out correct products, has products in stock that they claim to have and is overall truthful about its offerings. In Marimon et al. (2009) this factor proved to have a significant effect on Perceived Value.

### ***2.2.1.4 Privacy***

Marimon et al. (2009) were initially convinced that higher levels to which the customer feels that the site is safe and protects customer information leads to Perceived Value for the customer. This factor deals with questions regarding if the site can be trusted for protecting personal information about web shopping behavior and credit card information. In Marimon et al. (2009) this factor did not prove to have a significant effect on Perceived Value.

### ***2.2.1.5 Perceived Value***

The overall perceived value the customer feels depends on how the customer assesses; the overall feeling of how economical the site is, the overall feeling of convenience the site provides, the extent to which the consumer feels in control and the overall value he or she gets for the money and effort spent on the site. In Marimon et al. (2009) this concept proved to have a significant effect on Loyalty.

### ***2.2.1.6 Loyalty***

If the customer expresses a high level of perceived value, there will be an impact on Loyalty. The Loyalty concept is regarding if the customer is willing to say positive things and recommend the site to others, encourage others to use it, consider it to be his or her first choice and willingness to do business with the site in the coming months. In Marimon et al. (2009) this concept proved to have a significant effect on Actual Purchases.

### ***2.2.1.7 Actual Purchases***

Depending on the degree to which the consumer feels loyal to the online grocery store, the researchers argue that higher levels of Actual Purchase will occur. The Actual Purchases concept measures the number of online orders as well as the total value of online orders and is data that is actual and not self-reported.

### 2.2.2 Integrating Operations and Marketing in the online grocery industry by Boyer & Hult (2005)

Boyer & Hult (2005) attempts to create a model both applicable for operations, marketing and business strategy, with particular emphasis on operations strategy. By combining concepts from offline retailing research, as for example from Parasuraman et al. (1994) a new model was generated. Factors leading to Customer's Behavioral Intentions are according to Boyer & Hult (2005): eBusiness Quality, Product Quality, Service Quality, Online Access Ability and Attitude toward Internet-ordering. Of these, the three first had a significant impact on Customer's Behavioral Intentions.

Figure 3 presents the model by Boyer & Hult (2005) and is followed by a short description of each factor.

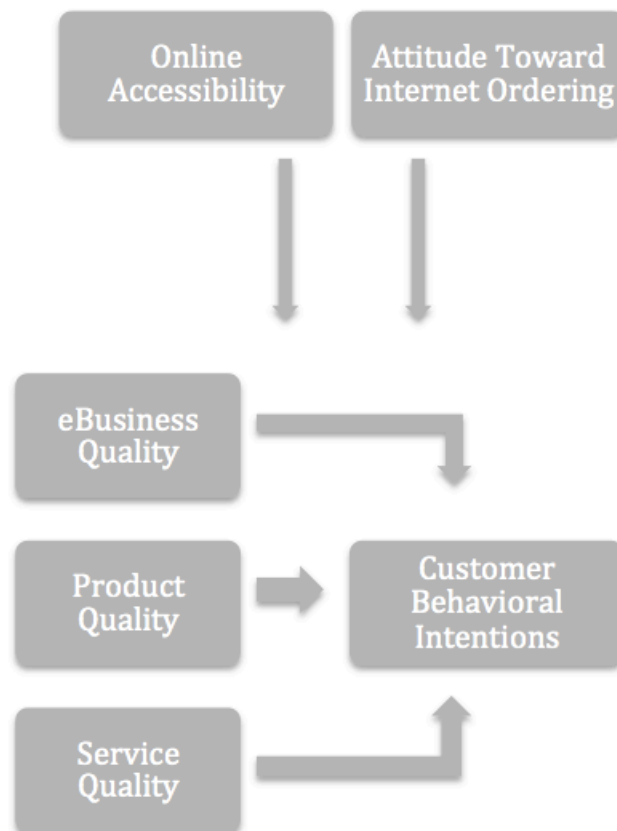


Figure 3 - Model by Boyer & Hult (2005)

#### 2.2.2.1 eBusiness Quality

Boyer & Hult (2005) concludes that the quality of the website is of great importance; user-friendliness and easy-made orders are positively related to purchase intentions. Placing the first to fourth order takes in average 75-80 minutes and after the fifth order, customers have learned how to use the website and then spend on average 25-30 minutes. Depending on where the consumers are positioned in this learning curve can have a large effect on their judgment towards ordering groceries online. Boyer & Hult (2005) therefore argues that online retailers must support the learning curve with an understandable webpage, increasing the feelings of convenience. Thus, a way to make the learning curve more efficient is of great importance according to Boyer & Hult (2005).

#### ***2.2.2.2 Product Quality***

When it comes to products, online retailers must be able to provide the same quality and range of goods that the consumers can find in traditional offline stores. Delivering from a distribution center provides a shorter logistical chain that makes customers assume that they are going to get fresher products. According to Boyer & Hult (2005) removal of customer's ability to touch and smell products also contributes to a problematic situation where the customer has to trust the retailer's judgment. Product Quality proved to have a significant effect on customers Behavioral Intentions.

#### ***2.2.2.3 Service Quality***

Excellent service and communication between customer and retailer can increase trust and is something that should be prioritized according to Boyer & Hult (2005). There is a vast amount of literature regarding how service is becoming increasingly important, especially when the price is held constant (Boyer & Hult, 2005). According to Boyer & Hult (2005) customers who believe that the service provided is superior in relation to other retailers, tend to attribute greater amounts of equity into the relationship with that retailer. How customers assess service quality in an e-commerce setting might be substantially different than in a traditional grocery store and thereby interesting to investigate. Service Quality proved to have a significant effect on customers Behavioral Intentions.

#### ***2.2.2.4 Online Accessibility and Attitude Towards Internet Ordering***

The two final concepts, which Boyer & Hult (2005) initially thought would be moderating for how consumers rated the other three concepts, were concerning Online Accessibility and Attitude Towards Internet Ordering. Online Accessibility regards to what extent the consumer has access to the Internet while the Attitude Towards Internet Ordering is regarding the consumer's feelings about ordering products or services online.

The reason to why Online Access Ability and Attitude toward Internet-ordering did not show any significance, might, according to Boyer & Hult (2005), be that most people today have a well-working connection to the Internet. The growing rate of Internet access in combination with an increased amount of online purchases might explain why the attitude towards Internet-ordering is not as controversial anymore. Technology and attitude is thus not a moderator, since it does not have a significant impact on the outcome of consumers purchase intentions (Boyer & Hult, 2005).

## 2.3 Our Theoretical Argumentation and Hypotheses

### 2.3.1 Our Theoretical Argumentation

Our theoretical framework consists of two studies, Marimon et al. (2009) and Boyer & Hult (2005). An argumentation to why these two studies will be combined in our research will follow below.

This study's foundation will be based on Marimon et al. (2009) combined with two added concepts from Boyer & Hult (2005), Service Quality and Product Quality. The reason to why Boyer & Hult (2005) has not been chosen as the foundation for the study is because of the lacking of, what we believe, is a thorough investigation of all aspects that needs to be assessed when measuring online business success in a grocery context. As for example, the concept called "eBusiness Quality" by Boyer & Hult (2005) is very similar to the factor "Efficiency" from Marimon et al. (2009). Marimon et al. (2009) additionally includes three other factors, which we believe provides a deeper and more thorough assessment of the website. Also, the two concepts regarding Online Accessibility and Attitude Toward Internet Ordering from Boyer & Hult (2005), we believe is not as relevant on the Swedish market. Internet penetration and ratio of the Swedish population who has ordered products or services online is very high and thereby the Accessibility and Attitude towards it might be of a positive nature (Finndahl, 2013).

Marimon et al. (2009) is further based on one of the most cited and well renowned articles in the field of online service quality. We therefore found it interesting to investigate whether or not the model could be tested in an online grocery setting in Sweden. This provided a chance to further increase the reliability of the study. Marimon et al. (2009) was the first researchers to apply the E-S-QUAL model in an online grocery context but decided to add a variable, investigating how Loyalty affected Actual Purchases. Marimon et al. (2009) argued that many previous studies had investigated Behavioral Intentions but never Actual Purchases. Measuring Actual Purchases is something we believe is interesting and relevant, since it is based on reality instead of imaginary intentions.

The results provided by Marimon et al. (2009) showed a significant correlation between System Availability and Fulfillment to Perceived Value while no significant correlation was found between Efficiency and Privacy to Perceived Value. The strongest correlation was found between Perceived Value and Loyalty but a significant correlation was also found between Loyalty and Actual Purchases. These results differ from Parasuraman, Zeithaml & Malhotra (2005) who found all correlations to be significant (Actual Purchases was not included in Parasuraman, Zeithaml & Malhotra, 2005). An explanation to these differences might be the specific context of a Spanish online supermarket that Marimon et al. (2009) examined. This further argues for doing additional research in the field to conclude if the findings by Marimon et al. (2009) can be considered to be applicable for overall online grocery retailing or only for the context Marimon et al. (2009) studied. Furthermore, it might be interesting to examine if there are differences in what aspects are important for a country like Sweden, where the Internet penetration and ratio of online shoppers is particularly high (Finndahl, 2013). Also, the fact that the results from Marimon et al. (2009) are five years old makes it interesting to investigate if the technology development has had an effect.

## 2.3.2 Hypotheses

### 2.3.2.1 Efficiency, System Availability, Fulfillment and Privacy (Marimon et al., 2009)

The first four hypotheses concern the different factor's relationship with Perceived Value. Perceived Value concerns the overall value that the customer feels regarding how economical the site is, the overall feeling of convenience the site provides, the extent to which the consumer feels in control and the overall value he or she gets for the money and effort spent on the site. Perceived Value is the first step in the process, before measuring Loyalty and Actual Purchases. The main aim of this study is to investigate what contributes to and has an effect on Actual Purchases.

The first factor presented in Marimon et al. (2009) is Efficiency. Efficiency concerns the layout of the website and how easy the customers feel it is to complete a transaction. Many researchers emphasize that the website's visual design has a great impact on the customer's feelings of perceived value. Szymanski & Hise (2000), Collier & Beinstock (2006), Yang & Peterson (2004) and Vrechopoulos et al. (2004) argues that visual layout and ease of use has a critical effect on traffic and sales. Thereby, it is of great importance for retailers to be aware of what visual layout is the most appropriate for their customers, products and brand image. Wolfinbarger & Gilly (2003) and Parasuraman, Zeithaml & Malhotra (2005) agrees with Vrechopoulos et al. (2004) and states that the most important factor to consider when assessing online business success is the Website design. Finally, Yoo & Donthu (2001) has named their model for assessing online business success SITEQUAL. Two out of four aspects they believed was the most important to consider were; Ease of Use and Design. This further argues for the importance of testing the Efficiency factor in this research, even though it did not show any significance in a Spanish online supermarket setting.

**Hypothesis H1:** Higher levels of Efficiency in a website are positively related to higher levels of Perceived Value.

The second factor presented in Marimon et al. (2009) is System Availability. System Availability concerns how well the website is working technically, as for example that it does not freeze or crash. Yoo & Donthu (2001) identified four important aspects to consider when assessing online business success, two of them being Speed and Security. Collier & Beinstock (2006) emphasize that Functionality of the site is one of the most important aspects of creating online business success. Furthermore, Hansen, Jensen & Solgaard (2004) who tested their model in an online grocery context, also found that System Availability had a significant impact on consumers' behavioral intentions, which can further indicate that it is an interesting factor to investigate.

**Hypothesis H2:** Higher levels of System Availability in a website are positively related to higher levels of Perceived Value.

The third factor presented by Marimon et al. (2009) concerns Fulfillment. The Fulfillment factor in this case concerns the overall reliability the consumer feels towards the online grocery store, this can for example relate to delivery options or offerings. According to Wolfinbarger & Gilly (2003) there are several important factors to keep in mind when assessing online businesses, one of them being Fulfillment/Reliability. Srinivasan, Anderson & Ponnayolu (2002) further argue that Care and Convenience are two out of the eight C's that are important determinants behind loyalty and consequently e-commerce success. The factor Care can be seen as the company's care for the consumer when being reliable and Convenience can be seen as offering a convenient service.

Another researcher who focuses on logistics is Murphy (2003). The author concludes that to be successful in selling groceries online, focus should lie in the logistics of the



business. Murphy (2003) argues that the online grocery retailer should offer convenient delivery and develop an efficient logistical chain to be successful. Finally, the findings from Boyer & Hult (2006) show that the factor Time Savings is of great importance for the consumer.

**Hypothesis H3:** Higher levels of Fulfillment in a website are positively related to higher levels of Perceived Value.

The fourth and final factor presented by Marimon et al. (2009) is the one concerning Privacy. The factor Privacy regards questions about the company being reliable in protecting the personal information that the consumer shares with them.

In the research made by Yoo & Donthu (2001), the importance of the factor concerning Security is further emphasized. Other researchers that found the Privacy factor to be of great importance are Parasuraman, Zeithaml & Malhotra (2005), Collier & Beinstock (2006), Yang & Peterson (2004) and Szymanski & Hise (2000). Finally, according to Thamizhvanan & Xavier (2013) trust was the most important factor behind online business success and that it to the largest extent contributes and affects customers purchase intentions. Since many researchers argue that the Privacy factor is of great importance to explain online business success, it is important to investigate if this also is the case in a country like Sweden, even though the findings in Marimon et al. (2009) did not show any significance for this hypothesis.

**Hypothesis H4:** Higher levels of Privacy in a website are positively related to higher levels of Perceived Value.

#### ***2.3.2.2 Service Quality and Product Quality (Boyer & Hult, 2005)***

In our theoretical framework, the factors Service Quality and Product Quality, which are provided by Boyer & Hult (2005), are added to the model by Marimon et al. (2009). The Service Quality factor consists of ten items while Product Quality consists of six items. Both factors showed to be significant in a grocery retailing online context and are therefore interesting to further investigate and include in our theoretical framework.

Several researchers have emphasized the importance of Service Quality. Parasuraman, Zeithaml & Malhotra (2005) created an additional scale to the E-S-QUAL-model, named the E-Recs-QUAL, which investigates the relationship between customer Service Quality and the impact on the Overall Quality of the Website. Researchers like Wolfinbarger & Gilly (2003) and Collier & Beinstock (2006) further argue that Service Quality is an important aspect of the customer's evaluation of the Overall Website Quality. Furthermore, Yang & Peterson (2004) and Bhattacharjee (2001) believe that in order to increase Customer Satisfaction and Loyalty, the online business must be able to deliver high valued and professional service. In line with this, Cronin, Brady & Hult (2000) argue that the consumer's assessment of the provided Service Quality reflects the overall feeling of satisfaction, which in turn leads to business success. Many of the above listed researchers suggest that Service Quality is an aspect that leads to the customer's assessment of the overall quality and satisfaction. Thus, we argue that Service Quality contributes to Perceived Value.

**Hypothesis H5:** Higher levels of Service Quality in a website are positively related to higher levels of Perceived Value.

Several researchers have also emphasized Product Quality. Rasmus & Nielsen (2005) found that one of the most important factors for customers evaluating online grocery websites was that the companies had to provide convenience, a wide product range, good prices and fresher products than in traditional stores. Thereby, providing a larger

product range and fresher products is crucial for delivering value to consumers buying groceries online. The Product Quality aspect was also emphasized by Boyer & Hult (2006) who found a significant correlation between Product Freshness and Time Savings to Behavioral Intentions. Finally, Yang & Peterson (2004) believe that in order to increase Customer Satisfaction, and consequently Loyalty, a company must offer differentiated and suitable products in line with what is being requested from target customers. Many of the above listed researchers suggest that Product Quality is an aspect that leads to the customer's assessment of the overall quality and satisfaction. Thus, we argue that Product Quality contributes to Perceived Value.

**Hypothesis H6:** Higher levels of Product Quality in a website are positively related to higher levels of Perceived Value.

### *2.3.2.3 Perceived Value, Loyalty and Actual Purchases (Marimon et al., 2009)*

According to Marimon et al. (2009) the relationship between Perceived Value and Loyalty was the strongest of all hypotheses. Other researchers that argue for the importance of Loyalty are Yoo & Donthu (2001), Srinivasan, Anderson & Ponnavaolu (2002) and Parasuraman, Zeithaml & Malhotra (2005).

As mentioned earlier in the Theoretical Chapter, Wolfinbarger & Gilly (2003) argue that different researchers can define business success in similar ways but using different terms. In these different terms, Loyalty is recurring as an important concept creating online business success but in different combinations and contexts. Thereby, Perceived Value and its effect on Loyalty should be further investigated.

**Hypothesis H7:** Higher levels of Perceived Value in a website are positively related to higher levels of Loyalty with regard to that website.

Marimon et al. (2009) was the first study to include Actual Purchases instead of Purchase Intentions in their model. The relationship between Loyalty and Actual Purchases was found to be significant and thereby is interesting to further investigate whether the same results would be found in a Swedish online grocery context. This might provide further strength to the findings of Marimon et al. (2009). As stated above, measuring Actual Purchases is interesting and relevant for the grocery industry, since it is based on reality instead of imaginary intentions.

**Hypothesis H8:** Higher levels of Loyalty with regard to a website are positively related to higher levels of Actual Purchases on that website.

In figure 4, an overview of the hypotheses and their placement in the model is presented.

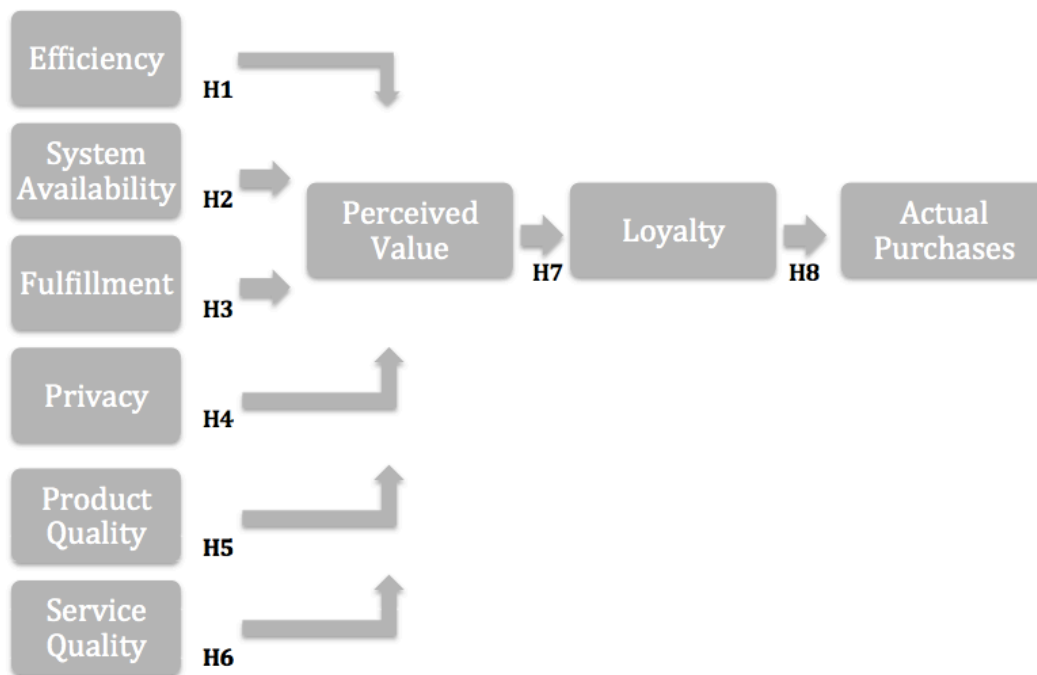


Figure 4 - Theoretical framework model + Hypotheses

## 3. METHOD

### 3.1 Introduction to the study

This study aims at presenting relevant insights in line with the formulated research aim and question. The research presented in this study has an aim of providing knowledge about what factors contribute to creating actual purchases of groceries online. Thereby, it could be argued that this study intends to provide pure research. Pure research is focused on an academic audience while its opposite, applied research, focuses on finding a solution to a specific problem while working closely with clients (Easterby-Smith, Thorpe & Jackson, 2012:10-11). While this research should ensure an academic standard, we would further wish for it to be of operational use for businesses working with grocery retailing online.

As described in the theoretical framework, an already existing model by Marimon et al. (2009) will be tested but complemented with added concepts, Service Quality and Product Quality from research by Boyer & Hult (2005). The research provided by these two studies provides an academic depth, which helps us investigate our research aim and question. By testing the models in a practical context, the research becomes more connected with reality and social practice.

### 3.2 Deductive Process & Quantitative research strategy

#### 3.2.1 Deductive Process

In this study, in-depth research regarding e-commerce retailing in general and more specific with grocery products and services was carried out. Different views of several researchers were presented to provide a broad and objective theoretical chapter. Based on what we wanted to investigate, relevant hypotheses were formulated. Thereby, the research in this thesis was conducted according to a deductive approach as described by Bryman & Bell (2011:11). The deductive process begins with doing thorough theoretical research in our selected area. While doing so, deeper knowledge of the field was gained and an idea of how our research was supposed to be positioned in relation to previous research was formed.

The hypotheses were formulated in accordance to the measurements that Marimon et al. (2009) and Boyer & Hult (2005) tested. The hypotheses expressed the relationship between two or several variables, which were to be tested in an empirical investigation. When generating hypotheses, we worked with the knowledge theoretical standpoint, Positivism (Easterby-Smith, Thorpe & Jackson, 2012:25). Positivism is an epistemology where the social reality is investigated with the help from natural science methods; in this study investigating attitudes towards online grocery shopping. Our goal with doing such research was to generate, test or confirm the theory (Easterby-Smith, Thorpe & Jackson, 2012:25).

When moving on to the data collection of this study, our aim was to collect data that could provide us with enough information to either accept or reject our pre-formulated hypotheses. The questions that were presented to the respondents in the web survey, were based on previous research by Marimon et al. (2009) and Boyer & Hult (2005). By using previously tested questions we hoped to increase the reliability and validity of the research (Bryman & Bell, 2011:263).

When analyzing the results of the data collection we started with testing the hypotheses. By accepting a hypothesis we acknowledged that there was a relationship between the variables and by rejecting a hypothesis we concluded that there was not a significantly

proven relationship (Malhotra, 2010:489). To be able to do so, we explored the data through quantitative analysis in SPSS.

In the final step of the deductive process, the theory was revised. When revising theory, we took an inductive approach, which can be put in contrast to the deductive process used continuously in the study (Bryman & Bell, 2011:11). Using an inductive approach, theory is continually being shaped while working according to a deductive approach; theory is confirmed or rejected (Bryman & Bell, 2011:11). Thereby, it is according to Bryman & Bell (2011:11-12) important to keep in mind that the deductive process does not always have to be as linear as it might seem. In this study, the last step of the deductive process was a revision of the theory. The revision of theory is presented in the Discussion and Conclusion chapter of this study.



Figure 5 - Deductive Process

### 3.2.2 Quantitative research strategy

This study is focused on studying attitudes towards online grocery retailing among customers and was carried out with a quantitative research approach. In order to give an overview and to provide a broad understanding of grocery retailing online, a quantitative approach is preferred over a qualitative. A quantitative and positivistic approach also increases the possibilities to generalize within the research field (Easterby-Smith, Thorpe & Jackson, 2012:66, Bryman & Bell 2011, 408). Since the qualitative method is more dedicated to in-depth analysis of specific situations, we instead chose to use a quantitative method. This provided us with a possibility to collect a larger diversity of primary data from several different respondents (Malhotra, 2010:73-74).

As described in the previous section, the quantitative research method is characterized by a deductive view, positivism and objectivism (Easterby-Smith, Thorpe & Jackson, 2012:23). Being a natural science method, criticism has been raised stating that it is not a suitable method for investigating the social reality (Bryman & Bell, 2011:167-168). Critics believe that quantitative researchers forget that humans have a tendency of interpreting the world they live in, which is unlike the natural sciences. Natural sciences methods are often precise, which can give a false sense of precision when applying it to social sciences, as it is not always as exact as numbers (Bryman & Bell, 2011:167-168). In this research, the objective to achieve a broad understanding of consumer's attitudes towards online grocery shopping was prioritized instead of focusing on deep analysis of specific customers. However, the study was carried out with questions regarding a specific company, which is presented in section 3.4.

### 3.3 Research design

A conclusive research design yields that the information is clearly defined, the sample is large, the process is structured and the analysis is quantitative (Malhotra, 2010:103). As can be seen in the literature review in the Theoretical chapter, the information was presented in a structured and clear manner. An overview of the different researches was presented in tables in both sections, concerning e-retailing in general and e-retailing with groceries. The sample size presented in the Method chapter should be considered as large since the survey was distributed to 7597 customers. When moving on to the Analysis chapter, the hypothesis testing and examination of relationships further argues that the set-up of the study is made according to a conclusive research design.

Our research design should to a large extent be considered to be of a descriptive nature, since it is characterized by prior formulations of hypotheses, it is preplanned and structured. Furthermore, our data was collected with a survey and analyzed with a quantitative method, which characterizes a descriptive research design (Malhotra, 2010:104). Descriptive research designs are aimed at describing something, in this thesis the characteristics of what is important when buying groceries online (Malhotra, 2010:106). In addition to describing the market characteristics of the online grocery industry, we also investigated the effect of the independent variables on the dependent, which can be classified as a causal research design (Malhotra, 2010:104).

For this study, the research design was of a cross sectional nature. In our study, a web survey was distributed, which is in line with what Bryman & Bell (2001:53) argue is the most commonly used method associated with cross sectional design. Furthermore, Bryman & Bell (2011:53-54) argue that cross sectional design contains collecting data from more than one case, which explains our large number of 896 respondents. This large number of respondents allowed us to make finer distinctions among them and to make more advanced investigations (Bryman & Bell, 2011:53-54). It is also desirable to get as much variation as possible among the respondents. In this research, the cases were divided according to their geographical area, all of which located in urban areas in Sweden. This kind of variation can increase the reliability and enrich the final results (Bryman & Bell, 2011:54).

Another aspect associated with cross sectional design, is that the data is gathered at a single point in time (Bryman & Bell, 2011:54). All the data in our study were obtained more or less simultaneously, while the respondents completed the questionnaire. The URL-link to our questionnaire was available to the respondents between 2014-04-22 and 2014-04-29. Since all respondents participated in our study between the above stated dates, this timeframe should be considered to be one point in time. If we instead had done the questionnaire available at several different occasions, the research should be considered to be of an experimental design. Thus, our research is of a non-experimental design (Bryman & Bell, 2011:54), which means that we in retrospect have to conclude what has occurred and investigate the reasons to why (Körner & Wahlgren, 2002:18).

An advantage with using cross sectional design is that it allowed an examination of patterns and associations between our variables. After having collected a large amount of data, a standardized and systematic method, the computer program SPSS, permitted us to analyze our obtained data. It is after this analysis possible to draw a conclusion; even though it might be with a lack of validity (Bryman & Bell, 2011:53).

In Figure 6 the conclusive research design is presented:

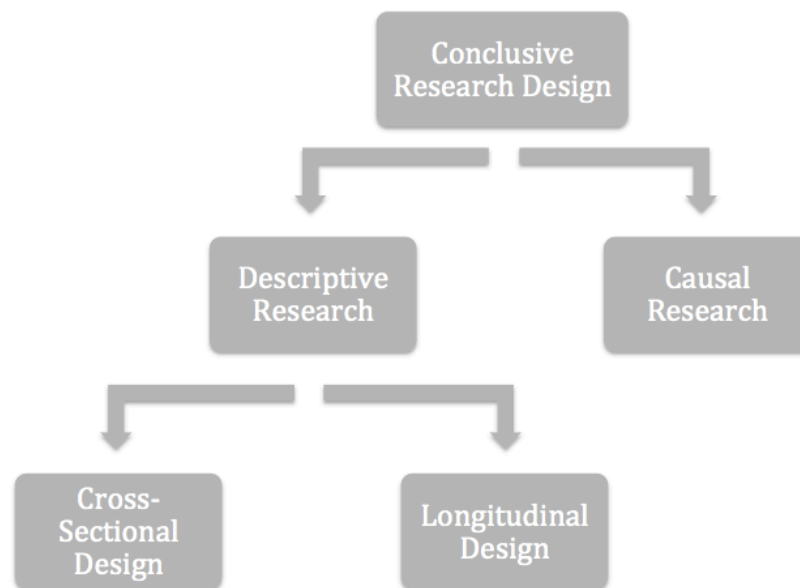


Figure 6 - Conclusive Research Design

### 3.4 Primary data, secondary sources and empirical material

In this study, empirical material, secondary sources and primary data were utilized.

In the theoretical chapter of this thesis, a literature review was conducted. This review was conducted in order to provide us with a deep understanding of the research in the field. The review provided us with insights that we could use for creating the basis of our study, the theoretical framework. The literature review consisted of empirical material, which stemmed from existing and well renowned literature within the research area of online businesses and groceries online. Except using academic journal articles, we complemented our theoretical research with scientific literature in terms of different industry related articles. The combination of the different sources allowed us to obtain more general valid material related to our study.

An advantage with using secondary sources is that it is very time efficient (Easterby-Smith, Thorpe & Jackson, 2012:12). The time and energy, which would be spent on creating new data, could instead be directed to other areas in the study, which will increase the final quality of our research (Easterby-Smith, Thorpe & Jackson, 2012:12). Furthermore, the secondary sources have already been tested and thereby are of high quality, contributing to the fulfillment of virtuous research (Bryman & Bell, 2011:263). By using secondary sources we could explore and demonstrate new patterns and relationships within the existing data (Easterby-Smith, Thorpe & Jackson, 2012).

The primary data is the data that the researcher him- or herself collects (Easterby-Smith, Thorpe & Jackson, 2012:12). Our primary data consisted of a structured web survey, which was collected through the online tool Google Forms. Although collecting primary data is time consuming, specific data was needed to make sure we increased the validity of our research. The primary data subsequently lead to new insights, to implement the purpose of the study and finally to generate a contribution to the research within the field (Easterby-Smith, Thorpe & Jackson, 2012:12).

## 3.5 Sampling

### 3.5.1 Coop Online – the empirical context

A crucial part of this study was to measure the independent variable's effects on the dependent variable, Actual Purchases. In order to do so, we had to get in contact with respondents who had made actual purchases from online grocery stores. When conducting the two pre-studies, we realized that it was difficult to get in contact with these individuals and thereby the idea to contact an online grocery store arose. We contacted several different online grocery stores and early on got a positive response from one of the largest online grocery stores in Sweden, Coop Online. Coop Online offered to help us distribute the web survey via their customer database, which solved the initial problem of finding respondents who had bought groceries online. In return, Coop Online could receive insights about how their customers assessed their business.

Coop Online is owned by Coop Sverige AB who also owns physical stores such as Coop Forum, Coop Extra, Coop Konsum and Coop Nära (Coop.se). In 2013, Coop Sverige AB's share of the grocery market in Sweden was 21,3% (Dn.se). This can be put in relation to the largest competitor, ICA, who has a market share of 50% (Dn.se). However, ICA does not provide a corporate and joint online store, but instead has different online stores depending on what local ICA store is closest to the customer. Thereby, ICA has many smaller online stores owned by the local ICA franchiser with smaller customer databases. In contrast, Coop Online provides a larger joint online store for all geographical areas in Sweden. Thereby, the customer database can be assumed to be much larger than the one of ICA.

Furthermore, the possibility to include analysis of both pre-composed grocery bags (providing the customer with groceries and recipes) as well as grocery bags with goods selected by the customer his or herself is of great interest. Since Coop Online provides both, we were very pleased that they wanted to participate in our study.

### 3.5.2 Sampling Technique

Since we did not have the opportunity to include every single relevant respondent within our specific area, a sampling strategy had to be conducted (Easterby- Smith, Thorpe & Jackson, 2012:212). When collecting data from a sample, the goal is to enable the possibility to make statements about the population beyond that specific context (Easterby- Smith, Thorpe & Jackson, 2012:213). Additionally, we wanted to make the results more reliable and have a greater depth, which the sampling design should reflect (Körner & Wahlgren, 2002:30). The sampling design is further divided into probability sampling and non- probability sampling; the latter used in our study.

As Körner & Wahlgren (2002:33) argues, a non- probability method is often executed when conducting marketing research. In non-probability sampling, some entities have a larger probability to be included in the sample (Bryman & Bell, 2011:190). In this study, a form of convenience sampling, so called judgmental sampling was conducted since Coop Online choose to distribute the questionnaire to a sample based on the judgment of the management of Coop Online. In judgmental sampling the professionals believes that the respondents are representative of the population of interest (Malhotra, 2010:379). In this case, the management of Coop Online believed that the sample chosen would consist of both representative as well as truthful respondents, providing a valid and accurate assessment of their business. We used this sampling technique since it is quick, of low cost and convenient (Malhotra, 2010:379). Although, it can be argued that judgmental sampling does not allow generalizations beyond the specific context. We cannot be sure that the entire population is accurately represented or clearly defined (Malhotra, 2010:379).



In the initial process of the study, a snowball sample was discussed as a preferred method of sampling (Malhotra, 2010:381). However, after having difficulties finding respondents by our own, the alternative offered by Coop Online was favored.

In this study, Coop Online distributed 7597 e-mails with the URL-link to the web survey to randomly selected customers. The respondents had to have met two criteria to be included in the sample; that they had ordered groceries in the last year but not during the last three weeks. Furthermore, only customers from the urban areas of Stockholm, Gothenburg and Malmö were included in the sample. This sample of customers might be viewed as representative since these customers also have access to other online grocery retailers who operates in the same geographical area. Since the market is in a developing stage and the resources are limited, several online grocery retailers focuses on operating in the urban areas of Sweden (Gripenberg & Emmerik, 2014).

### 3.5.3 Survey Design

To study attitudes through surveys should be considered to be an appropriate method according to Bryman & Bell (2011:620), which argues for why we decided to use an online survey tool. Using an online survey tool made it possible to reach out to our target population and to distribute the survey easily. Another argument to why we used the web-based survey is because of its easiness to monitor, to design and to customize to our specific study (Easterby-Smith, Thorpe & Jackson, 2012:220). Besides this, a self-completion questionnaire does not allow any interviewer effect and it is very convenient for the respondent to complete (Bryman & Bell: 2011:232-233). The online tool we used was Google Forms. The fact that it is free of charge as well as easy to use made it an appropriate choice for our study. In order to get in contact with the respondents, the URL-link to the web survey was distributed via e-mail.

Concerning the disadvantages, we could not be physically present to explain or clarify any uncertainties. However, our study was based on already existing and established questions, in combination with our two performed pre studies, which should reduce the amount of uncertainties substantially (Bryman & Bell, 2011: 263).

In this study, respondents were contacted via e-mail and presented to the link to the questionnaire. Thereby, a combination of an online tool and e-mail distribution was used. Arguments speaking against e-mail distributions of surveys are that it often takes longer time to get the replies back as well as a greater loss of respondents (Bryman & Bell, 2011:661).

The questionnaire presented to the respondents began with an introduction page where respondents filled in demographical information, which is presented in Appendix 3. On the introduction page, respondents were further asked to state how much money they (approximately) had spent on groceries online per month during 2013, as well as how many orders they had placed. These two questions correspond to the final dependent variable, Actual Purchases that we wanted to investigate.

The questions in our web-based survey were mainly based on previous researcher's theories and models. Marimon et al. (2009) represented the foundation, where the majority of the questions stemmed from. The questions from Marimon et al. (2009) concerned what four concepts were important for creating a superior Perceived Value for the customer, which in turn led to Loyalty and Actual Purchases. Those original four concepts from Marimon et al. (2009) were combined with two other concepts from Boyer & Hult (2005), Service Quality and Product Quality. We wanted to investigate whether or not those concepts were important, and could increase the explanatory degree of the original model from Marimon et al. (2009). Our questionnaire was therefore constructed after the already established items from the two researcher

groups. We also wanted to investigate whether or not we could conclude any differences or similarities.

Our questionnaire consisted of structured questions. This means that we presented a specified set of response alternatives. The alternatives were accessible through a scale format, a 5-graded Likert scale, which measures the intentions or attitudes of the respondent (Malhotra, 2011:344-345, Bryman & Bell, 2011:253). We used a comprehensible language and no ambiguous questions in order to make sure that everything could be understood easily and not provide any room for the respondents own interpretations (Malhotra, 2011:346). The 5- graded Likert scale was used, since we wanted to be able to relate our results with Marimon et al. (2009) who used this scale in their research. We also wanted to make it easier for the respondents and therefore choose a 5-graded scale instead of the 7-graded.

We wanted to use the Likert scale because it is easy for the respondents to understand, but it also made it easier for us to code the respondents' answers when it comes to the interpretation and analysis of the gathered data. A disadvantage with using Likert scales is that the respondent can feel tired after a while and feel that it is diligent to complete the questionnaire (Bryman & Bell, 2011:240). Thus, we chose to use a shorter and easier questionnaire since it increases the response rates (Easterby-Smith, Thorpe & Jackson 2008:214). In order to shorten the questionnaire, we needed to decrease the amount of questions by performing a pre study. This study is presented in depth under section 3.9.

We wanted to include a "do not know" – alternative to make sure that we avoided skewed response tendencies but also excluded uninvolved respondents. Unfortunately, Google Forms could not provide us with this option and thereby we instructed the respondents to leave the question blank if they felt that they were unable or did not know how to answer the question. This means that we do not know if the respondents have missed out on a question or actively have chosen not to answer the question. The fact that we received, regardless of reason, uncompleted surveys might be seen as a disadvantage for us. When receiving the replies, the response rate was 11,8%, which could be considered to be rather low (Malhotra, 2010:225). However, when considering the ratio of how many customers who open e-mails from Coop Online, the response rate should be considered to be decent.

According to Bryman & Bell (2011:240), it is important to give the respondent clear instructions about how to complete the questionnaire. To be, if possible, even more secure that the questionnaire was fulfilled in a correct manner; we made sure to construct the questionnaire so that the respondents only could choose and mark one option on every question or statement. Furthermore, some of the questions regarding the demographical data were made mandatory because of the importance of receiving this information. The option to do so with all questions was not achievable since we had to make it possible for the respondents to leave questions blank that they felt unsecure about.

In Table 3 below, an overview of the first two pages of the questionnaire is presented. These two pages concern demographical data and questions regarding Actual Purchase. We wanted to present the questions regarding Actual Purchases in the beginning of the survey since they are not graded on a Likert scale, as the other items adopted from previous researchers. Furthermore, we also wanted the respondents to be as attentive as possible when assessing the questions regarding Actual Purchases.

In the second table, Table 4, an overview of all questions and where they stem from is presented. Additional information about what concept they belong to and if they are included in the final questionnaire is also provided.

Question	Answer Options
<b>Page 1</b>	
Have you ever ordered Coop Online's grocery bag? - Pre composed grocery bag with groceries and recipes.	Yes/No
Have you ever ordered groceries via Coop Online by selecting the groceries yourself? - For example milk or meat.	Yes/No
What pros do you think are the most important with ordering groceries via Coop Online? - Choose the <i>three</i> most important options.	<ul style="list-style-type: none"> <li>- I get my groceries home delivered and don't have to carry them home.</li> <li>- I save time.</li> <li>- I don't have to go to crowded and messy grocery stores.</li> <li>- I can make my order whenever I want.</li> <li>- I do less impulse buying and thereby it is less expensive.</li> <li>- I get new inspiration since I get new recipes.</li> <li>- I get the solution to the week's dinner problems delivered home.</li> <li>- I get a larger range of products to choose from.</li> <li>- The products I buy online are of higher quality than the ones I can buy in a physical store.</li> <li>- There are no pros.</li> </ul>
What cons do you think are the most important with ordering groceries via Coop Online? - Choose the <i>three</i> most important options.	<ul style="list-style-type: none"> <li>- I want to see my groceries before buying them.</li> <li>- Cost of delivery</li> <li>- I think it is enjoyable to grocery shop in a physical store.</li> <li>- The products are more expensive than in the physical store.</li> <li>- I want my groceries directly and do not want to wait for a delivery.</li> <li>- I do not trust that the quality is equal to what is offered in the physical store.</li> <li>- I get better service in a physical store.</li> <li>- The online grocery store does not offer delivery in my hometown.</li> <li>- I continue shopping in physical stores because of old habits.</li> <li>- I think it is complicated; the web sites are not user friendly.</li> <li>- The delivery offered is not convenient to me.</li> <li>- The goods I order online are of poorer quality than the ones I can get in a physical store.</li> <li>- I do not trust online shopping.</li> <li>- There are no cons.</li> </ul>
<b>Actual Purchases:</b> How many times have you (approximately) ordered groceries from Coop Online during the last year? (From Marimon et al., 2009)	<ul style="list-style-type: none"> <li>- 1-2 times</li> <li>- 3-6 times</li> <li>- 7+ times</li> <li>- Do not know</li> </ul>
<b>Actual Purchases:</b> How much (approximately) have your household spent on groceries from Coop Online in average per month during the last year? (From Marimon et al., 2009)	<ul style="list-style-type: none"> <li>- 1-2000 kr</li> <li>- 2000-3999 kr</li> <li>- 4000-4999 kr</li> <li>- 5000-5999 kr</li> <li>- 6000+ kr</li> <li>- Do not know</li> </ul>
Have you ever ordered groceries from another grocery store online? - Either by ordering a pre-composed grocery bag or by selecting products from the range by yourself.	Yes/No
<b>Page 2</b>	
Gender	Man/Woman
Age	<ul style="list-style-type: none"> <li>- 20-29 years</li> <li>- 30-39 years</li> <li>- 40-49 years</li> <li>- 50-59 years</li> <li>- 60-69 years</li> <li>- 70+ years</li> </ul>
Education - Choose the highest achieved education.	<ul style="list-style-type: none"> <li>- Elementary School</li> <li>- High School</li> <li>- College / University</li> </ul>
Household size - Mark the number of people in your household	<ul style="list-style-type: none"> <li>- 1 person</li> <li>- 2 persons</li> <li>- 3 persons</li> <li>- 4 persons</li> <li>- 5+ persons</li> </ul>
Do you have access to a car to do your grocery shopping? - In the majority of occasions.	Yes/No.

Table 3 - Page 1 & 2 of Questionnaire

Researcher	Concept	Question ID	Question	Included or Not Included
	<b>Hypothesis H1:</b>			
Marimon et al. (2009)	Efficiency	EFF1	1. This site makes it easy to find what I need.	Included
Marimon et al. (2009)	Efficiency	EFF2	2. It makes it easy to get anywhere on the site.	Included
Marimon et al. (2009)	Efficiency	EFF3	3. It enables me to complete a transaction quickly.	Included
Marimon et al. (2009)	Efficiency	EFF4	Information at this site is well organized.	Not Included
Marimon et al. (2009)	Efficiency	EFF5	It loads its pages fast.	Not Included
Marimon et al. (2009)	Efficiency	EFF6	4. This site is simple to use.	Included
Marimon et al. (2009)	Efficiency	EFF7	This site enables me to get on to it quickly.	Not Included
Marimon et al. (2009)	Efficiency	EFF8	5. This site is well organized.	Included
	<b>Hypothesis H2:</b>			
Marimon et al. (2009)	System Availability	SYA1	6. This site is always available for business.	Included
Marimon et al. (2009)	System Availability	SYA2	7. This site launches and runs right away.	Included
Marimon et al. (2009)	System Availability	SYA3	This site does not crash.	Not Included
Marimon et al. (2009)	System Availability	SYA4	Pages at this site do not freeze after I enter my order information.	Not Included
	<b>Hypothesis H3:</b>			
Marimon et al. (2009)	Fulfillment	FUL1	8. It delivers orders when promised.	Included
Marimon et al. (2009)	Fulfillment	FUL2	This site makes items available for delivery within a suitable time frame.	Not Included
Marimon et al. (2009)	Fulfillment	FUL3	*FUL3 in original E-S-QUAL is removed and FUL7 has been reworded to reflect the fixed delivery times of the supermarket operation.	Not Included
Marimon et al. (2009)	Fulfillment	FUL4	9. It sends out the items ordered.	Included
Marimon et al. (2009)	Fulfillment	FUL5	It has in stock the items the company claims to have.	Not Included
Marimon et al. (2009)	Fulfillment	FUL6	It is truthful about its offerings.	Not Included
Marimon et al. (2009)	Fulfillment	FUL7	10. The delivery time offered to me is convenient.	Included
	<b>Hypothesis H4:</b>			
Marimon et al. (2009)	Privacy	PRI1	It protects information about my web shopping behaviour.	Not Included
Marimon et al. (2009)	Privacy	PRI2	11. It does not share my personal information with other sites.	Included
Marimon et al. (2009)	Privacy	PRI3	12. This site protects information about my credit card.	Included
	<b>Hypothesis H5:</b>			
Boyer & Hult (2005)	Service Quality	SQ1	13. XYZ Company's employees are reliable in providing the service I expect	Included
Boyer & Hult (2005)	Service Quality	SQ2	XYZ Company's employees are understanding of my service needs	Not Included
Boyer & Hult (2005)	Service Quality	SQ3	14. XYZ Company's employees are responsive to my service requests	Included
Boyer & Hult (2005)	Service Quality	SQ4	15. XYZ Company's employees are competent in providing expected service	Included
Boyer & Hult (2005)	Service Quality	SQ5	I feel secure in my service encounters with XYZ Company's employees	Not Included
Boyer & Hult (2005)	Service Quality	SQ6	XYZ Company's employees are courteous in providing me service	Not Included
Boyer & Hult (2005)	Service Quality	SQ7	16. XYZ Company's employees are accessible to answer my questions	Included
Boyer & Hult (2005)	Service Quality	SQ8	The tangible aspects of XYZ Company's service (appearance of delivery vans, staff, products, etc.) are excellent	Not Included
Boyer & Hult (2005)	Service Quality	SQ9	17. XYZ Company has good credibility in providing the service I need	Included

Boyer & Hult (2005)	Service Quality	SQ10	18. I can easily communicate with XYZ Company regarding my service needs	Included
	<b>Hypothesis H6:</b>			
Boyer & Hult (2005)	Product Quality	PQ1	XYZ Company has prestigious (high-quality) products	Not Included
Boyer & Hult (2005)	Product Quality	PQ2	19. XYZ Company has an excellent assortment of products	Included
Boyer & Hult (2005)	Product Quality	PQ3	XYZ Company's products are among the best	Not Included
Boyer & Hult (2005)	Product Quality	PQ4	20. XYZ Company has a sufficient range of product choices (I can get what I want)	Included
Boyer & Hult (2005)	Product Quality	PQ5	21. The products are the same quality as I can get in the store	Included
Boyer & Hult (2005)	Product Quality	PQ6	The number of substitutions or out of stock items is reasonable	Not Included
	<b>Hypothesis H7:</b>			
Marimon et al. (2009)	Perceived Value	PEV1	22. The prices of the products and services available at this site (how economical the site is).	Included
Marimon et al. (2009)	Perceived Value	PEV2	23. The overall convenience of using this site.	Included
Marimon et al. (2009)	Perceived Value	PEV3	The extent to which the site gives you a feeling of being in control.	Not Included
Marimon et al. (2009)	Perceived Value	PEV4	24. The overall value you get from this site for your money and effort.	Included
	<b>Hypothesis H8:</b>			
Marimon et al. (2009)	Loyalty	LOY1	25. Say positive things about this site to other people?	Included
Marimon et al. (2009)	Loyalty	LOY2	26. Recommend this site to someone who seeks your advice?	Included
Marimon et al. (2009)	Loyalty	LOY3	Encourage friends and others to do business with this site?	Not Included
Marimon et al. (2009)	Loyalty	LOY4	Consider this site to be your first choice for future transactions?	Not Included
Marimon et al. (2009)	Loyalty	LOY5	27. Do more business with this site in the coming months?	Included
Marimon et al. (2009)	Actual Purchases	PUR1	xx. Number of online orders in 2007: 1 = one or two orders 2 = three or four orders 3 = between 5 and 9 orders 4 = between 10 and 19 orders 5 = 20 orders or more	Included
Marimon et al. (2009)	Actual Purchases	PUR2	xx. Total value of online orders in 2007: 1 = <€175 2 = between €176 and €500 3 = between €501 and €1000 4 = between €1001 and €1500 5 = >€1501	Included

Table 4 - Overview of items in questionnaire

Three questions were added to the survey upon the request of the management of Coop Online. To be able to analyze the consumer's attitudes towards competitors in the online grocery market, we were able to measure their loyalty from another perspective, which differed from Marimon et al. (2009). Furthermore, we also provided an opportunity for the respondents to express their other thoughts that had not been previously touched upon in the study.

Added by	Question
Coop Online Management	28. I believe that the products and services provided by Coop Online correspond with my initial expectations.
Coop Online Management	29. Being able to pick up goods in the physical store that I have ordered online is very attractive to me.
Coop Online Management	30. Being able to pick up goods in a "drive through" that I have ordered online is very attractive to me.
The authors	31. I will order from another grocery online store within the coming months.
The authors	32. Is there anything you would like to add? - As for example what you think is good or bad with the products and services provided by Coop Online.

**Table 5 - Added questions to questionnaire**

### 3.5.4 Data Level

Our questionnaire was divided into two parts. The first part concerned demographical data and control variables. In the second part the respondents were asked to take a stand in different statements regarding their grocery shopping online experience. The questionnaire thereby contained different kinds of information and thus the data level varied between the questions.

The first part was designed with a mixture of dichotomous variables, nominal scales and ordinal scales. We asked the respondent to fill in their gender; male or female, a dichotomous variable. This was measured through a nominal scale whose numbers only serves as tags for identifying and classifying objects (Malhotra, 2011:284). From the dichotomous variables and the nominal scale, we could thereby identify and classify the respondents in terms of gender. An ordinal scale was used when we asked respondents to categorize themselves into an age interval (Malhotra, 2011:286). Different ranges of age with ten-year intervals, from the age of 20, were presented. Possible respondents under the age of 20 were thereby excluded from the study. We did not believe that customers below the age of 20 were representative enough for the average customer buying groceries online. The ordinal scale allowed us to perform a ranking of the respondents but without stating the magnitude of differences between them (Malhotra, 2011:285). The last age interval was 70 years or older since we did not expect to see any remarkable variations among respondents over the ages of 70. Finndahl (2013) states that the daily usage of Internet for people over 70 years of age is much lower than for people in other age intervals, and thereby this group is put together as one in this research. According to Körner & Wahlgren (2006:20-21), the determination of the measurements data level is important to ascertain before running the analysis of the data.

In the second part, the respondents were asked to take a stand in relation to several presented statements about their online shopping of groceries. On an interval scale, the respondents were asked to mark their conformity. The Likert scale went from strongly agree, 1, to strongly disagree, 5, while the numbers from 2-4 were not marked with an explanation. The numbers on an interval scale indicates and rates the objects, and a numerical distance is equal the distance in the characteristic being measured (Malhotra, 2011:286). An interval scale is therefore more beneficial to use than an ordinal scale

since it contains all information that can be gained from an ordinal scale, while it also allows making comparisons between the objects (Malhotra, 2011:286).

### 3.6 Pre Study

We wanted to make sure that our questionnaire was functional and easy to understand. We also wanted to identify potential problems and uncertainties to be able to eliminate these before we distributed the final questionnaire (Bryman & Bell, 2011:262). In order to ensure all of those aspects, two pre studies were executed at two separate points in time.

#### 3.6.1 Pre study one

Pre study one is presented in Appendix 1. Since the aim of our study was to investigate Actual Purchases, we wanted to know whether the respondent had bought groceries online as an opening question. Although, we allowed respondents who had not bought groceries online to participate in the first pre study. The argument for doing so was that we believed that they could still offer a valid opinion about what concepts they thought were important when buying groceries online.

Our study is based on already existing theory and models, from where we also got our items for our questionnaire. Since we wanted to combine two different models, the amount of questions became too many and we were afraid that respondents would not have energy to complete the questionnaire. We decided to shorten the questionnaire in order to get truthful and honest responses from the respondents (Easterby-Smith, Thorpe & Jackson, 2011:214). As an initial procedure, we conducted a web-based survey, where 30 respondents were asked to identify what questions belonging to each concept were the most important and relevant when shopping groceries online. For each concept, respondents could select a number of items, which they considered to be the "most important". Of the 30 distributed surveys, we obtained 22 from where we could conclude that 18 items should be excluded from the questionnaire. Originally we had 48 items which decreased to 30 items, as can be seen in Appendix 1.

Below, all concepts and what questions have been excluded are presented. The questions can also be found in Table 4 where an overview of all questions is offered.

##### 3.6.1.1 Efficiency:

From this concept, three items were removed (EFF4,5,7). Concerning EFF5 and EFF7 they both had ratings below 7%, which ranked them the lowest out of the eight questions. A possible explanation to why these two questions received low ratings might be that they are concerned with Internet connection. Today, this might not be an issue for consumers buying online because of the increased rate of high-speed Internet connection (Finndahl, 2013). Question EFF4 received 10%, which could also be considered to be very low when relating it to the highest-ranking questions that got around 20% (EFF1 and EFF6). A possible explanation to why EFF4 was eliminated might be that it can be considered to be very similar to EFF1.

##### 3.6.1.2 System Availability:

Out of the four questions in this concept, two questions were eliminated, SYA3 and SYA4. These two questions received 11% and 14%, which can be compared with 41% and 34% for the other two questions. A possible explanation to this might, again, be that the questions concern Internet connection, which today might not be considered to be as serious of an issue (Finndahl, 2013).

##### 3.6.1.3 Fulfillment:

From this concept, three out of six questions were eliminated, FUL2, FUL5 and FUL6. All three received a rating below 12%, which should be related to 27%, 27% and 20%. In

this case, the respondents way of ranking gave us a clear image of what they believed was the most important but we did not conclude an obvious possible explanation to the underlying reasons for their priorities.

#### ***3.6.1.4 Privacy:***

Out of the three questions presented to the respondents, one was eliminated. PRI1 was removed because of a rating of 5% while the other two both had 48%. Looking at the statistics from this concept, it is obvious which question should be removed but we did not conclude any specific reason to why this might be the case.

#### ***3.6.1.5 Service Quality:***

From this concept, we decided to eliminate four questions (SQ2,5,6,8) out of the total number of ten questions. In this case, the respondents were presented with a larger number of questions, which were rather similar. This might explain why the ratings did not fluctuate as much. The four removed questions received ratings between 6-8% while the six questions that we decided to keep received ratings between 10-15%.

#### ***3.6.1.6 Product Quality:***

In this concept six questions were presented to the respondents and three questions were eliminated (PQ1,3,6). The eliminated questions received scores ranging from 6-11% while the remaining questions were rated at 21-27%. A possible explanation to why the three questions were ranked low might be that the purpose in similar questions is expressed in a clearer manner according to the respondents.

#### ***3.6.1.7 Perceived Value:***

Out of the four questions regarding this concept, only one, PEV3 was eliminated. This question only received 5%, while the other three received 20-48%. Looking at the statistics from this concept, it is obvious which question should be removed but we did not conclude any specific reason to why this might be the case.

#### ***3.6.1.8 Loyalty:***

Of the five questions in this concept, two were eliminated. LOY4 was eliminated with only 12% of the votes and thereby was not of importance to the respondents. LOY3 was eliminated with 18%, which is not a great difference from LOY5 with 21%, but we argue that LOY3 is very similar to LOY1 and thus is excessive and should be removed.

#### ***3.6.1.9 Actual Purchases:***

In this concept we decided not to remove any of the questions since they originally only were two.

### **3.6.2 Pre study two**

Pre Study two is presented in Appendix 2. After we had eliminated the 18 items from the first pre study, we wanted to test the shorter questionnaire again to make sure that everything was in order. We wanted to make sure that the uncertainty was minimized and that everything from content, wording, sequence and instructions was coherent (Malhotra, 2011:354).

When conducting the second pilot study we decided to only include respondents who actually had purchased groceries online since our objective was to measure what contributes to Actual Purchases and not Purchase Intentions. In the first pre study, respondents were asked to state what they believed was important for them when buying groceries online. For Pre Study two, questions were formulated so that the respondents should assess a specific company that they had done business with.

During the second pre study, we asked 10 respondents to test the questionnaire again. The second pre study was administered in a similar context as the first pre study and the goal was to achieve a high understandability since we could not be physically



present to explain and clarify potential uncertainties, which could be doable through personal interviews (Bryman & Bell, 2011:262). Malhotra (2010:354) argues that pre studies should be administered in a similar environment to what the final study will be. This was unfortunately not possible in this study since the questionnaire was distributed via Coop Online. We did not have access to their customer database at an earlier point of time. Thereby, none of the respondents of the pre-studies were part of the final study. Finally, the aim of the second pre study was to increase the understandability by testing the questions a second time. The survey was furthermore also, upon the request of Coop Online, complemented with three questions, that were excluded from our analysis. Neither were the two questions that were added by the authors.

Insights gained from conducting the second pre study were that we needed to formulate the questions in a more personal way, as for example “17. Coop Online are trustworthy in providing the service *I* need” (“17. Coop Online har god trovärdighet gällande att tillhandahålla den service *jag* behöver.”).

Finally, we would have liked to test the survey a third time, applying it to Coop Online customers, in the exact same environment that the final survey was conducted in. However, the possibility to do so was not available to us, since we did not have access to their customer database at an earlier point of time.

### 3.7 Data collection

In total, 7 597 e-mails were sent out through Coop Online’s customer database. 80% of which were to customers in the Stockholm area, 10% of which in the Gothenburg area and finally 10% of which in the Malmö area. Of the 896 responses that were received, a response rate of 11,8% can be concluded. As been stated above, the ratio of Coop Online customers who open e-mails from Coop Online is rather low and thereby the response rate of 11,8% should be considered to be decent. In this case, the opportunity to use an already existing database was preferred since we can get in contact with actual customers even though we cannot fully control the sampling. The fact that the number of responses is quite large,  $n=896$ , and that the items have scored high Cronbach’s Alpha values to some extent compensates for the low response rate of 11,8%.

Of the replies, 69% of the respondents were living in the Stockholm area, 20% in the Gothenburg area and 8,5% in the Malmö area. 2,5% of the respondents did not provide an answer to where they currently live. Thereby, the allocation of where the respondents live does not fully reflect the distribution of the sample.

During the data collection process, every step was documented. We wanted to make sure that every results gained from the study could be used for further analysis and for further research (Bryman & Bell, 2011:165).

### 3.8 Quantitative Data Analysis

In the Analysis and Results chapter of this thesis, the computer software SPSS was used to perform different quantitative analyses. The URL-link to the web survey was sent out to 7597 customers of Coop Online and 896 of these were received as completed responses. 5 responses were eliminated, as they had not yet ordered groceries online (either through self composed grocery bag or pre-composed with recipes), since this was a requirement for participating in the study. We could not control how many who opened the URL-link and did not complete the web survey since Google Forms

unfortunately does not provide this information. Thereby, we do not know about the loss of those respondents.

Where the respondents had left questions blank or chosen the “do not know” alternative, their replies were coded as blank/missing values in the analysis. The replies were given on a 5-point Likert scale, an interval scale. With this scale, different analyses were achievable perform, as for example correlations with Pearson’s r. The first analysis that was carried out concerned the demographical information about the respondents, as presented in Table 6. The second step was to investigate what respondents believed were pros and cons with buying groceries online as well as how much and how often they had ordered, as shown in Table 7. The following analysis concerned the means of the questions 1-31, as can be seen in Table 8. This table presents the average values for each of the questions as well as the average of each concept.

In order to be able to perform the more advanced analyses, we decided to test the internal reliability with the help of Cronbach’s Alpha. The goal was to be able to combine the items into one variable for each concept. It was possible to combine all concepts except Actual Purchases, which had to be measured through two items instead. All Cronbach’s Alpha values are presented in Table 9.

The next analysis performed regarded the relationships among the variables and was tested with the help of a correlation matrix. The correlation coefficient is based on Pearson’s r and provides a value between -1 and +1, showing the strength of the relationship. All correlations are presented in Table 10.

To measure the independent variable’s explanatory degree of the dependent variable Perceived Value and to be able to reject or accept the hypotheses, three multiple regression analyses were performed. Both the enter method and the stepwise method were tested in order to determine the independent variables effect on the dependent.

The final analysis performed was concerning Perceived Value’s effect on Loyalty and Loyalty’s effect on Actual Purchases. Since we only had one independent variable in these two separate analyses, the bivariate regression analysis was preferred. All regression analyses are presented in Table 12-29.

### 3.9 Reliability and Validity

#### 3.9.1 Reliability

Reliability is concerned with if the results of the study are repeatable (Bryman & Bell, 2011:41). This means that the measurement should yield the same results when tested at different points in time (Easterby-Smith, Thorpe & Jackson, 2012:71). According to Bryman & Bell (2011:41) reliability is especially important for quantitative studies since measurements used in quantitative research always should aim at being stable. To make sure our study is as reliable as possible, we have kept the following points, presented by Bryman & Bell (2011:158) in mind:

*Stability:* If a measurement is replicated over time, the results should not be significantly different. In this study, the items have been tested once before which hopefully decreases the fluctuations over time. On the other hand, this study is carried out with another sample as well as another combination of items, which might increase fluctuations. Furthermore, two pre studies were carried out in order to increase the stability of the measure.

*Internal reliability:* The respondent’s score on one item should relate to how he or she scores on another item. For quantitative research, this is assessed with the

measurement called Cronbach's Alpha. In section 4.2 Internal Reliability, a reliability test was carried out in order to be able to combine several items into one variable representing the different concepts.

*Inter-observer consistency:* If several different people are involved in the recording or translation of data into categories, there is a risk that lack of consistency in their decision-making occurs. In our case, the respondents were given a self-completion questionnaire, which means that they were all presented with the exact same questionnaire and thereby the inter-observer consistency should not be considered to be a problem.

### 3.9.2 Validity

When we conducted this study, our aims were to; 1) investigate the effects of the independent variables on the dependent variable and 2) conclude valuable insights about online grocery retailing in Sweden. The first of which regards the internal validity while the second concerns the external validity (Malhotra, 2010:254). Internal validity measures how accurate an experiment is. It is important to know whether the influences of the independent variable(s) really are the ones causing an effect on the dependent variable(s), which the internal validity ensures (Malhotra, 2010:254).

A measure of consistency is another way to describe validity. In our case, that means that our questionnaire about online grocery shopping should appropriately measure what it is supposed to measure, the effect on Actual Purchases (Körner & Wahlgren, 2002:22). This kind of validity is called measure validity or concept validity (Bryman & Bell, 2011:42, Easterby-Smith, Thorpe & Jackson, 2012:71). To increase the validity, we have used already existing items from the theories described in the Theoretical Chapter. Since Marimon et al. (2009) and Boyer & Hult (2005) have already tested the items for internal validity at least once; we have an increased possibility to make sure that the correct measures are carried out (Bryman & Bell, 2011:42).

Concerning the second aim in our research, the external validity determines if the relationships that were found in the experiment can be generalized to other situations beyond this study. It could further be interesting to know to what extent the generalization can be made, as for example to what other populations or other grocery companies, except Coop Online in Sweden (Malhotra, 2011:255). In order to exploit the possibility to generalize, a non-probability sampling method is vital (Malhotra, 2010:376), which includes a representative sample (Bryman & Bell, 2011:43).

In this case the representativeness of the sample can be discussed. In this study, 7597 e-mails were sent out; 80% of which to respondents within the Stockholm area, 10% within the Gothenburg area and 10% within the Malmö area. This means that the respondents currently live close or within an urban area in Sweden and that the sample thereby cannot be generalized to all of Sweden but might bring valuable insights about the greater urban areas. Furthermore, there are limitations to generalize to the entire online grocery industry in Sweden since the sample is only based on the customers of Coop Online. The items presented to the respondents are company-specific and thereby their assessment might look different when asked to assess other companies. Finally, we are aware of the fact that the sampling method used in this study decreases the possibilities to generalize and thereby we should be cautious in the way that we generalize the findings to other contexts.

## 4. RESULTS & ANALYSIS

The results and analysis chapter is divided into three parts. First, the descriptive statistics with an overview of the respondents profile is presented, followed by the means for each of the items. Second, a correlation matrix is presented together with the regression analyses, used for the hypothesis testing.

### 4.1 Descriptive Statistics

#### 4.1.1 Respondent Profile

This section will provide an overview of the respondent profile, summarized in Table 6 and Table 7 below.

In Table 6, the total number of respondents is presented. 896 respondents completed the web survey. Of these, 80% were women and 20% were men. This might be considered to be a skewed result in favor of women. However, we believe that the allocation, to some extent, is representable of the allocation between genders ordering online groceries of the population in Sweden. Regarding age, the majority of the respondents, 32%, were aged between 40-49 years old. The second largest age group, consisting of 31% of the respondents, were aged between 30-39 years. An explanation to the allocation of ages in the sample might be that respondents within these age intervals might have families and thereby lack time to spend on grocery shopping (Svensk Distanshandel, 2013). Furthermore, the most common household size in the sample is 4 persons (28%), which could indicate that many respondents have children.

When looking at the respondents' education level, 66% of the respondents have a college or university degree. Thereby, we can conclude that the majority of the respondents are well educated. Furthermore, 69% of the respondents live in the Stockholm area, 20% in Gothenburg and 8,5% in Malmö. The allocation of where the respondents live is a result of the sampling, where only urban areas were chosen to be included. Finally, 66% of the respondents have access to a car to do their grocery shopping. Thus, not having access to a car might not be the most important reason for buying groceries online. Regardless of having access to a car, respondents state that one of the most important pros of buying groceries online is that they get the goods home delivered and do not have to carry them home.

In Table 7, the pros and cons of how the respondents assess buying groceries online is presented. The three most appreciated and important factors of ordering their goods online are; *I get my groceries home delivered and don't have to carry them home, I save time and I can make my order whenever I want.*

When looking at the cons of buying groceries online, the most negative aspects are; *I want to see my groceries before buying them, Cost of delivery and The products are more expensive than in the physical store.* The question regarding what pros and cons is the most important when buying groceries online, was included in the research by Svensk Distanshandel (2013). Svensk Distanshandel (2013) found the exact same aspects to be the most important. However, the allocation and ratings of the other aspects have some differences, which could be explained by the differences in sampling.

When it comes to how many orders the respondents have placed, the majority, 46% have placed 3-6 orders with Coop Online. Thereby, they can be seen as appropriate respondents with enough experience to be able to give a fair and trustworthy assessment of the products and services. Furthermore, the majority of the respondents, 59% have spent between 1-2000 SEK in average per month buying groceries from Coop Online. However, 45% of the respondents have bought groceries online from another retailer. Consequently, we do not know if they are currently a customer of other online grocery stores in addition to Coop Online or if they have only ordered from there once

or twice. The fact that many of the respondents have tried another online grocery store we believe is an advantage since we think that they can make a better assessment of Coop Online if they have a wider point of reference. The majority, 55% have not ordered from another online grocery store, which might indicate some form of customer devotion.

	Frequency	Percentage
<b>Gender</b>		
Man	183	20
Woman	713	80
Total	896	100%
<b>Age</b>		
20-29 years	50	6
30-39 years	275	31
40-49 years	289	32
50-59 years	135	15
60-69 years	85	9
70+ years	62	7
Total	896	100%
<b>Education</b>		
Elementary School	37	4
High School	265	30
College / University	594	66
Total	896	100%
<b>Household Size</b>		
1 person	159	18
2 persons	197	22
3 persons	176	20
4 persons	251	28
5+ persons	113	13
Total	896	100%
<b>Do you have access to a car to do your grocery shopping?</b>		
Yes	594	66
No	302	34
Total	896	100%
<b>Zipcode</b>		
Stockholm area	616	69
Gothenburg area	182	20
Malmö area	76	8,5
Loss	22	2,5
Total	896	100%
<b>Have you ever ordered Coop Online's grocery bag?</b> - Pre composed grocery bag with groceries and recipes.		
Yes	237	26
No	659	74
Total	896	100%
<b>Have you ever ordered groceries via Coop Online by selecting the groceries yourself?</b> - For example milk or meat.		
Yes	862	96
No	34	4
Total	896	100%

Table 6 - Overview of Respondents Profile Part I

	Frequency	Percentage
<b>What pros do you think are the most important with ordering groceries via Coop Online?</b> - Choose the <i>three</i> most important options.		
I get my groceries home delivered and don't have to carry them home.	846	33
I save time.	559	22
I don't have to go to crowded and messy grocery stores.	233	9
I can make my order whenever I want.	558	22
I do less impulse buying and thereby it is less expensive.	149	6
I get new inspiration since I get new recipes.	51	2
I get the solution to the week's dinner problems delivered home.	86	3
I get a larger range of products to choose from.	17	1
The products I buy online are of higher quality than the ones I can buy in a physical store.	31	1
There are no pros.	1	0
Other	42	2
Total	2573 (N=858)	100%
<b>What cons do you think are the most important with ordering groceries via Coop Online?</b> - Choose the <i>three</i> most important options.		
I want to see my groceries before buying them.	309	15
Cost of delivery	402	19
I think it is enjoyable to grocery shop in a physical store.	129	6
The products are more expensive than in the physical store.	532	25
I want my groceries directly and do not want to wait for a delivery.	50	2
I do not trust that the quality is equal to what is offered in the physical store.	93	4
I get better service in a physical store.	33	2
The online grocery store does not offer delivery in my hometown.	6	0
I continue shopping in physical stores because of old habits.	39	2
I think it is complicated; the web sites are not user friendly.	136	6
The delivery offered is not convenient to me.	48	2
The goods I order online are of poorer quality than the ones I can get in a physical store.	69	3
I do not trust online shopping.	0	0
There are no cons.	85	4
Other	192	9
Total	2123 (N=708)	100%
<b>How many times have you (approximately) ordered groceries from Coop Online during the last year?</b> (From Marimon et al., 2009)		
1-2 times	264	30
3-6 times	414	46
7+ times	198	22
Do not know	20	2
Total	896	100%
<b>How much (approximately) have your household spent on groceries from Coop Online in average per month during the last year?</b> (From Marimon et al., 2009)		
1-2000 kr	526	59
2000-3999 kr	156	17
4000-4999 kr	61	7
5000-5999 kr	30	3
6000+ kr	39	4
Do not know	84	10
Total	896	100%
<b>Have you ever ordered groceries from another grocery store online?</b> - Either by ordering a pre-composed grocery bag or by selecting products from the range by yourself.		
Yes	400	45
No	496	55
Total	896	100%

Table 7 - Overview of Respondents Profile Part II

### 4.1.2 Item Means

Measures of the central tendency indicate what is typical for a distribution of values (Bryman & Bell, 2012:344). To identify the central tendency of a distribution, different measures can be compared in quantitative data analysis; the arithmetic mean, median and mode (Malhotra, 2010:486). Table 8 demonstrates the arithmetic mean, which is the average of the distribution presented for the different questions and cases (Malhotra, 2010:486). Since our data is spread on an interval scale, the arithmetic mean is the most appropriate to use according to Bryman & Bell (2012:344). Körner & Wahlgren (2002:73) argues that researchers should be aware that the arithmetic mean is sensitive to extreme values, having outliers can decrease the robustness of the measurement (Malhotra, 2010:486).

Table 8 presents the means for all concepts tested in this study. All questions were answered by approximately the same number of respondents, which makes a comparison between the concepts accurate.

For the first concept, Efficiency, the means of the items included scored values between 3.55 and 3.60. This resulted in an average mean of 3.57 for Efficiency. Thus, the respondents assess Coop Online's performance as sufficient in this concept.

Regarding the second concept tested, System Availability, two items were included. The means for these two items were 3,98 respectively 4,11. This resulted in a concept mean of 4.05. This should be seen as a relatively high score on a 5- graded scale, which indicates that the respondents assess Coop Online's performance regarding System Availability as more than sufficient.

The third concept included in our study concerns Fulfillment. The items included scored between 4.05 and 4.43, which resulted in a concept mean of 4.19. The value of 4.19 is the second highest mean of all concepts.

The fourth concept concerned Coop Online's performance regarding Privacy. The concept included two items, which scored 4.13 respectively 4.28. This resulted in a concept mean of 4.20, which is the highest mean of all concepts.

Besides testing the four initial concepts adopted from Marimon et al. (2009), the two concepts added from Boyer & Hult (2005) were included. The first, Service Quality, scored between 3.82 and 4.04. This resulted in a concept mean of 3.97. As can be seen in the other concepts mentioned above, the proliferation between the means within the concepts is not remarkably large. Thus, no further conclusion about the items is meaningful.

The second concept adopted from Boyer & Hult (2005), Product Quality, achieved means between 3.12 and 3.85. This resulted in a concept mean of 3.83. The proliferation between the items included in this concept showed to have a relatively higher spread than the above-mentioned concepts. A conclusion that can be made according to the given means is that the respondents evaluate the quality of products to be relatively better than the offered range of products.

Regarding Perceived Value, the means were between 3.13 and 4.08. This resulted in a concept mean of 3.60. The values, in accordance with Product Quality, showed a relatively high spread between the items in the concept. As can be seen in Table 8, the respondents evaluate the economical aspect of using the site to be relatively low, which resulted in a comparatively low score. Although, the respondents evaluate the convenience with using the site as high, which might explain that the overall value gained by the site was scored in between the two opposites.

The last concept tested was Loyalty. Means between 3.88 and 3.91 were found, which resulted in a concept mean of 3.89. The proliferations between the means were not high; thereby no further argumentation is meaningful.

Table 8 further presents the standard deviation of the means for the various items. The standard deviation is a statistical measure of how spread the values are in a distribution. If the value to a large extent deviates from the mean, the standard deviation is high. If the values are closely clustered around mean, the standard deviation is low (Körner & Wahlgren, 2012:101). The standard deviations in this study lie between 0.780 and 1.443, which should be put in relation to that a 5-graded Likert scale was used.



Concept	Question	Valid N	Missing N	Mean	Std. Deviation
Efficiency	1. This site makes it easy to find what I need.	894	2	3,57	0,954
Efficiency	2. It makes it easy to get anywhere on the site.	890	6	3,55	0,971
Efficiency	3. It enables me to complete a transaction quickly.	883	13	3,59	1,114
Efficiency	4. This site is simple to use.	876	20	3,60	0,989
Efficiency	5. This site is well organized.	891	5	3,56	0,975
<i>Concept mean</i>				3,57	
System Availability	6. This site is always available for business.	883	13	4,11	0,933
System Availability	7. This site launches and runs right away.	878	18	3,98	1,014
<i>Concept mean</i>				4,05	
Fulfillment	8. It delivers orders when promised.	887	9	4,43	0,780
Fulfillment	9. It sends out the items ordered.	889	7	4,05	0,979
Fulfillment	10. The delivery time offered to me is convenient.	886	10	4,11	0,981
<i>Concept mean</i>				4,19	
Privacy	11. It does not share my personal information with other sites.	851	45	4,13	0,926
Privacy	12. This site protects information about my credit card.	861	35	4,28	0,823
<i>Concept mean</i>				4,20	
Service Quality	13. XYZ Company's employees are reliable in providing the service I expect	858	38	4,04	0,855
Service Quality	14. XYZ Company's employees are responsive to my service requests	845	51	4,01	0,890
Service Quality	15. XYZ Company's employees are competent in providing expected service	842	54	3,98	0,895
Service Quality	16. XYZ Company's employees are accessible to answer my questions	845	51	3,96	0,906
Service Quality	17. XYZ Company has good credibility in providing the service I need	847	49	4,01	0,868
Service Quality	18. I can easily communicate with XYZ Company regarding my service needs	847	49	3,82	0,954
<i>Concept mean</i>				3,97	
Product Quality	19. XYZ Company has an excellent assortment of products	882	14	3,18	1,075
Product Quality	20. XYZ Company has a sufficient range of product choices (I can get what I want)	885	11	3,12	1,112
Product Quality	21. The products are the same quality as I can get in the store	885	11	3,85	1,042
<i>Concept mean</i>				3,83	
Perceived Value	22. The prices of the products and services available at this site (how economical the site is).	884	12	3,13	1,010
Perceived Value	23. The overall convenience of using this site.	878	18	4,08	0,839
Perceived Value	24. The overall value you get from this site for your money and effort.	876	20	3,59	0,913
<i>Concept mean</i>				3,60	
Loyalty	25. Say positive things about this site to other people?	880	16	3,89	0,986
Loyalty	26. Recommend this site to someone who seeks your advice?	870	26	3,91	1,021
Loyalty	27. Do more business with this site in the coming months?	879	17	3,88	1,093
<i>Concept mean</i>				3,89	
Coop Online Management	28. I believe that the products and services provided by Coop Online correspond with my initial expectations.	878	18	3,72	0,951
Coop Online Management	29. Being able to pick up goods in the physical store that I have ordered online is very attractive to me.	859	37	2,11	1,342
Coop Online Management	30. Being able to pick up goods in a "drive through" that I have ordered online is very attractive to me.	856	40	2,23	1,419
The authors	31. I will order from another grocery online store within the coming months.	878	18	2,63	1,443

Table 8 - Item Means

## 4.2 Internal Reliability

In order to simplify the following correlation and regression analysis, we wanted to test whether or not the items within each concept could be combined. To determine this, we conducted an inter- item reliability analysis. Each concept; Efficiency, System Availability, Fulfillment, Privacy, Service Quality, Product Quality, Perceived Value, Loyalty and Actual Purchases were all internally tested in order to be able to combine the items into one variable. Since questions 28-32 does not belong to a specific concept, they will be excluded from following analyses and hypothesis testing.

In each of the concepts, except Actual Purchases, the inter-item correlation measurement provided numbers  $>0.6$ , which indicates that the items to a high extent correlate with each other (Malhotra, 2010:319). The items within all concepts, except Actual Purchases, could thus be combined to one new variable for each concept. The reliability test that was used in this analysis was the internal consistency reliability measurement Cronbach's Alpha. The Cronbach's Alpha provides a summarized correlation measurement of all items and shows the internal reliability between the items chosen in order to measure its reliability. The only concept, which did not get a value over 0.6, was Actual Purchases; this concept will thereby not be combined into one variable. Its original items will be used separately.

In our internal consistency reliability testing, the Cronbach's Alpha values were all over 0.6, except for Actual Purchases. All values are presented in Table 9:

<b>Concept</b>	<b>Cronbach's Alpha</b>
Efficiency	0.920
System Availability	0.815
Fulfillment	0.627
Privacy	0.801
Service Quality	0.942
Product Quality	0.807
Perceived Value	0.796
Loyalty	0.882
Actual Purchases	0.458

**Table 9 - Inter-item Reliability**

All Cronbach's Alpha values, except Actual Purchases, were situated between 0.627-0.942, which indicates that the internal reliability of the variables were higher than the suggested limit. Thereby, a merge of the items into one variable is motivated. Those combined factors will subsequently be used in the following analysis. Further information about the internal reliability testing and exact numbers and what items have been combined can be found in Appendix 4.

No testing of the validity was carried out during the Analysis chapter of this thesis since all items have been tested by previous studies. A more detailed description of validity can be found in section 3.6.1 Validity.

### 4.3 Correlations

To be able to study the relationships among the concepts, we performed a correlation analysis. In Table 10, the correlation matrix is presented. The relation between the variables is measured according to Pearson's  $r$  (Malhotra, 2010:638). The values of the correlations should provide a number between -1 and +1, which shows the strength of the relationship. A closer value to -1, indicates that the direction is negative and thus the more one of the variables increase, the more the other decreases (Malhotra, 2010:641). A closer value to +1, the more positive the direction is, which means that if one of the variables increases the other variable increase as well (Malhotra, 2010:641).

When it comes to the statistical significance level, we have chosen to accept a statistical significance level of  $p < 0.05$ . The significance level in this case means that there is a 5% risk that the study can show correlations in the sample that does not exist in the population (Körner & Wahlgren, 2006:183). The significance level of  $p < 0.05$  is considered to be the most common when doing social science research and is recommended by Malhotra (2010:492). In addition, the table below further presents if the correlations are significant on a  $p < 0.01$ -level to show if the strength of the correlation is exceptional.

The correlation coefficients for each concept are discussed more in detail below each hypothesis in the section 4.4 Hypothesis Testing and Regression Analysis.

Table 10 presents the correlations:

**Correlations**

		How many times have you ordered groceries	How much have your household spent on groceries	Efficiency	System Availability	Fulfillment	Privacy	Service Quality	Product Quality	Perceived Value	Loyalty
How many times have you ordered groceries	Pearson Correlation	1									
	Sig. (2-tailed)										
How much have your household spent on groceries	N	876									
	Pearson Correlation	,297**	1								
Efficiency	Sig. (2-tailed)	,000									
	N	807	812								
System Availability	Pearson Correlation	,018	,052	1							
	Sig. (2-tailed)	,587	,136								
Fulfillment	N	876	812	896							
	Pearson Correlation	,018	,041	,548**	1						
Privacy	Sig. (2-tailed)	,593	,246	,000							
	N	874	810	894	894						
Service Quality	Pearson Correlation	-,052	-,064	,302**	,322**	1					
	Sig. (2-tailed)	,127	,070	,000	,000						
Product Quality	N	875	811	895	894	895					
	Pearson Correlation	,160**	,042	,228**	,247**	,271**	1				
Perceived Value	Sig. (2-tailed)	,000	,241	,000	,000	,000					
	N	850	789	868	867	868	868				
Loyalty	Pearson Correlation	,121**	,028	,459**	,394**	,450**	,450**	1			
	Sig. (2-tailed)	,000	,428	,000	,000	,000	,000				
How many times have you ordered groceries	N	856	794	875	875	875	855	875			
	Pearson Correlation	-,013	,011	,440**	,252**	,316**	,238**	,424**	1		
How much have your household spent on groceries	Sig. (2-tailed)	,705	,749	,000	,000	,000	,000	,000			
	N	872	808	892	891	892	865	874	892		
Efficiency	Pearson Correlation	,172**	,063	,501**	,378**	,373**	,336**	,539**	,608**	1	
	Sig. (2-tailed)	,000	,072	,000	,000	,000	,000	,000	,000		
System Availability	N	874	810	894	893	894	867	874	892	894	
	Pearson Correlation	,237**	,094**	,424**	,353**	,398**	,327**	,542**	,491**	,681**	1
Fulfillment	Sig. (2-tailed)	,000	,007	,000	,000	,000	,000	,000	,000	,000	
	N	874	810	894	893	893	866	874	890	892	894

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 10 - Correlations**

#### 4.4 Hypothesis Testing and Regression Analysis

Of the eight hypotheses in this study, hypothesis one to four stem from the research by Marimon et al. (2009). Hypotheses five and six stem from Boyer & Hult (2005) and finally hypothesis seven and eight from Marimon et al. (2009). By using already formulated hypotheses we have the opportunity to either strengthen or weaken the correlations and relationships found by previous researchers. It is furthermore interesting to see whether the same hypotheses are found to be significant for the Swedish grocery market as well and in the context of Coop Online. When performing the hypothesis testing, the combined new variables are used, except for Actual Purchases, as presented in section 4.2 Internal Reliability.

The regression analysis was performed in order to investigate whether the hypotheses could be accepted or rejected and to study the degree to which the different independent variables could explain the dependent variables. When performing regression analysis, different tables are provided by SPSS when doing the different steps of the analysis. An explanation to the different parts of the regression analysis is provided below;

Table	Explanation
Model Summary	<p>The multiple correlation coefficient, <b>R<sup>2</sup></b> is the strength of the association, which estimates the degree of the explained variance in a value between 0 and 1 (Malhotra, 2010:578). In our case, to what extent the independent variables can explain the dependent.</p> <p>The <b>adjusted R<sup>2</sup></b> is adjusted for the number of independent variables that are included in the analysis. The coefficient decreases when a larger number of independent variables are included (Malhotra, 2010:578). In this study, the adjusted R<sup>2</sup> is analyzed because of the large number of independent variables.</p> <p><b>Std. Error of the Estimate</b> is the standard deviation of the actual Y values from the predicted Y values (Malhotra, 2010:569).</p>
ANOVA	<p>It is according to Wahlgren (2008:115) appropriate to perform an ANOVA analysis when comparing means in more than two variables. The ANOVA table tests the variables with a confidence level of 95% (0.05), which means that there is only a 5% risk of error in the sample.</p> <p><b>Sum of Squares</b> is the total sum of the squares of the difference of the dependent variables and its mean (Malhotra, 2010:569).</p> <p><b>Degrees of Freedom (df)</b> is a restriction principle that provides a value of how much the statistical result can vary (Körner &amp; Wahlgren, 2006:162).</p> <p>The <b>mean square</b> is the sum of squares divided by the appropriate degrees of freedom.</p> <p>The <b>F-value</b> compares the variation in the groups with the variations between the groups. The smaller the variation is within the groups and the larger it is between the groups, the F-value increases (Wahlgren, 2008:115). The variance is the standard deviation raised by two and is a measure of the spread around the mean (Körner &amp; Wahlgren, 2002:106).</p>

	<p>If the <b>significance</b> coefficient is below 0.05 the result is to 95% statistically proven (Wahlgren, 2008:132). Furthermore, this means that the F-value is larger than the critical value, which is dependent of how many cases are included in the analysis (Wahlgren, 2008:126).</p>
Coefficient	<p>Below the unstandardized coefficients, the <b>B-value</b> is presented. The B-value is the direction of the coefficient, which indicates the estimated change in Y when changing one step in X (Wahlgren, 2008:127).</p> <p>Under standardized coefficients, the <b>Beta</b> is presented. The Beta represents how strong the relation between the independent and the dependent variable is and whether it is positive or negative (Malhotra, 2010:569).</p> <p>The significance level is presented for each of the variables under <b>Sig.</b></p> <p>The <b>t-value</b> is the B-value divided by the standard error (Malhotra, 2010:504). The t-value should provide a number larger than +1,96 or smaller than -1,96, in order for the coefficient to be significant at the 95% level (SPSS Akuten, 2010).</p> <p>The <b>Collinearity Statistics</b> is the inter correlation among the independent variables. If the <b>VIF</b> value &gt;10 there is an unacceptably high inter correlation among the independent variables (Malhotra, 2010:586).</p>

Table 11 - Regression Analysis Table Explanation

#### 4.4.1 Multiple Regression Analysis – Enter Method

To be able to investigate whether or not the hypotheses could be accepted or rejected as well as determine the different independent variables effect on and explanatory degree of the dependent variable, we performed so called multiple linear regression analysis (Malhotra, 2010:577). In contrast to the bivariate regression analysis, a multiple regression analysis includes three or more independent variables (Malhotra, 2010:577).

By performing two separate multiple regression analyses, we first investigated the four hypotheses with variables from Marimon et al. (2009) (Test 1) and second, the two hypotheses with variables from Boyer & Hult (2005) (Test 2).

##### Test 1: Variables by Marimon et al. (2009)

The full SPSS output is presented in Appendix 4.

The first regression analysis was performed in order to determine if the hypotheses could be accepted or rejected. We also wanted to investigate to what extent the original variables from Marimon et al. (2009) could explain the variance in the dependent variable, Perceived Value. The independent variables included in this analysis were; Efficiency, System Availability, Fulfillment and Privacy.

According to Table 12, the four variables from Marimon et al. (2009) together provided an explanatory degree of the variance in Perceived Value of 34%.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,586 <sup>a</sup>	,343	,340	,63698

a. Predictors: (Constant), Privacy, Efficiency, Fulfillment, SystemAvailability

b. Dependent Variable: PerceivedValue

**Table 12 - Regression 1 - Test 1 Explanatory Degree**

According to Table 13, the ANOVA table, the statistical significance is 0.000, which means that the results are statistically significant at a 0.05 level and that the risk of rejecting the null-hypothesis when it is true is 5%. The F-value (112,475) is thereby higher than the critical value of F.

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	182,544	4	45,636	112,475	,000 <sup>b</sup>
1 Residual	349,346	861	,406		
Total	531,889	865			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), Privacy, Efficiency, Fulfillment, SystemAvailability

**Table 13 - Regression 1 - Test 1 ANOVA**

Individually, all of the variables are significant on the 95% level. The B-value is the highest for Efficiency. All of the variables have positive Beta values, which means that there is a positive relationship between the independent variables and the dependent. The strongest relationship was found between Efficiency and Perceived Value. We can also conclude a relationship between the Beta value and the significance coefficient. The higher Beta value and lower significance coefficient, the larger effect on Perceived Value. This can be concluded when looking at Efficiency, Fulfillment and Privacy that all have higher Beta values than System Availability.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	,536	,162		3,305	,001		
1 Efficiency	,323	,030	,360	10,737	,000	,677	1,477
SystemAvailability	,071	,030	,081	2,391	,017	,664	1,506
Fulfillment	,208	,034	,186	6,152	,000	,838	1,194
Privacy	,179	,029	,183	6,267	,000	,892	1,121

a. Dependent Variable: PerceivedValue

**Table 14 - Regression 1 - Test 1 Coefficients**

**4.4.1.1 Hypothesis H1: Higher levels of Efficiency in a website are positively related to higher levels of Perceived Value.**

Efficiency symbolizes the user-friendliness of the site, how the information on the site is organized as well as if the site loads fast.

The first hypothesis tested was regarding if Efficiency was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship provides a value of 0.501 with a significance level of 0.01. This level is higher than the accepted level of 0.05, which means that there is only a 1% risk that there is not a relationship in the population, as shown in the sample. Furthermore, the correlation coefficient of 0.501 indicates that the linear relationship is positive. When the customer believe that the website is efficient, his or her perceived value is positively affected.

When studying Table 14, Efficiency was significant with a coefficient of 0.000. The t-value (10.737) is remarkably higher than the accepted level of 1.96, which further strengthens the relationship between Efficiency and Perceived Value. Furthermore, the Beta-value also reflects the significant relationship between the concepts, with a value of 0.360. Studying the B-value, we can conclude that if Efficiency increases with one unit, the estimated increase in Perceived Value is 0.323. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Marimon et al. (2009) Efficiency did not prove to have a significant effect on Perceived Value and thereby the hypothesis was not accepted in the context of a Spanish online grocery store. Marimon et al. (2009) argued that the factor Efficiency was very similar to System Availability and thus might be overlapping. We do not conclude an obvious explanation to why the Swedish customers believe that Efficiency is more



important. However, we are able to connect Efficiency to one of the most important aspects of buying groceries online, Saving Time (Table 7). Consequently the website has to be well organized and user-friendly.

✓ Hypothesis H1 is accepted.

#### ***4.4.1.2 Hypothesis H2: Higher levels of System Availability in a website are positively related to higher levels of Perceived Value.***

System Availability represents the technological use of the webpage, if the site works correctly and if the site is available for business.

The second hypothesis tested was if System Availability was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship provides a value of 0.378 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.378 indicates that the linear relationship is positive. When the customers assess the System Availability positively, his or her perceived value is positively affected.

When studying Table 14, System Availability was found to be significant with a coefficient of 0.017. The t-value (2.391) is higher than the accepted level of 1.96, which further strengthens the relationship between System Availability and Perceived Value. Furthermore, the Beta-value also reflects the significant relationship between the concepts, providing a value of 0.081. Studying the B-value, we can conclude that if System Availability increases with one unit, the estimated increase in Perceived Value is 0.071. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Marimon et al. (2009) System Availability proved to have a significant effect on Perceived Value and thereby the hypothesis was accepted in the context of a Spanish online grocery store. Marimon et al. (2009) argued that the factor Efficiency was very similar to System Availability and thus might be overlapping. In this case System Availability might better describe the customer experience with the website.

Since the findings in our study, also suggests that System Availability is an important aspect of a positive Perceived Value, we can further strengthen the results of Marimon et al. (2009). The fact that Swedish customers assess the technological use of the website and that the website is always available for business as highly important can be related to one of the most important pros of buying groceries online; being able to make the order whenever customers want (Table 7).

✓ Hypothesis H2 is accepted.

#### ***4.4.1.3 Hypothesis H3: Higher levels of Fulfillment in a website are positively related to higher levels of Perceived Value.***

Fulfillment regards delivery questions; if the company delivers within a suitable timeframe, sends out correct products, has products in stock that they claim to have and is overall truthful about its offerings.

The third hypothesis tested was if Fulfillment was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship takes a value of 0.373 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.373 indicates that the linear relationship is positive. When the customer assesses the delivery and offerings positively, his or her perceived value is positively affected.

When studying Table 14, Fulfillment was found to be significant with a coefficient of 0.000. The t-value (6.152) is higher than the accepted level of 1.96, which further strengthens the relationship between Fulfillment and Perceived Value. Furthermore, the Beta-value also reflects the significant relationship between the concepts, taking on a value of 0.186. Studying the B-value, we can conclude that if Fulfillment increases with one unit, the estimated increase in Perceived Value is 0.208. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Marimon et al. (2009) Fulfillment proved to have a significant effect on Perceived Value and thereby the hypothesis was accepted in the context of a Spanish online grocery store. Since the findings in our study, also suggests that Fulfillment is an important aspect of a positive Perceived Value, we can further strengthen the results of Marimon et al. (2009). Swedish consumers believe that one of the most important aspects of buying groceries online is the ability to get the goods delivered to their home (Table 7). Thereby, the delivery offerings have to meet the customer expectations of the service.

- ✓ Hypothesis H3 is accepted.

#### *4.4.1.4 Hypothesis H4: Higher levels of Privacy in a website are positively related to higher levels of Perceived Value.*

The Privacy factor deals with questions regarding if the site can be trusted for protecting personal information about web shopping behavior and credit card information.

The fourth hypothesis tested was if Privacy was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship takes a value of 0.336 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.336 indicates that the linear relationship is positive. When the customer assesses the trustworthiness of the website, his or her perceived value is positively affected.

When studying Table 14, Privacy was found to be significant with a coefficient of 0.000. The t-value (6.257) is higher than the accepted level of 1.96, which further strengthens the relationship between Privacy and Perceived Value. Furthermore, the Beta-value (0.183) also reflects the significant relationship between the concepts. Studying the B-value, we can conclude that if Fulfillment increases with one unit, the estimated increase in Perceived Value is 0.179. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Marimon et al. (2009) Privacy did not prove to have a significant effect on Perceived Value and thereby the hypothesis was rejected in the context of a Spanish online grocery store. Since the findings in our study, suggests that Privacy is an important aspect of a positive Perceived Value, we might be able to weaken the results of Marimon et al. (2009). The reason to why we do not want to make clear comparisons is that our study is not an exact replica of the study by Marimon et al (2009) and thereby no exact comparison can be made. The difference in the results might be explained by the difference between the Spanish and Swedish culture and political aspects concerning online privacy. Swedish consumers believe that the extent to which they trust a website positively affects their perceived value with that specific website. In this study and in the study by Marimon et al. (2009) the questions were regarding how they assessed a specific online grocery store's ability to protect their personal information. High ratings on these questions indicates that the specific company does a good job doing so, which means that the Spanish customers still might believe that questions regarding Privacy is important. Thus, the ability to strengthen or weaken the results by Marimon et al. (2009) is complicated since the questions are company specific.

- ✓ Hypothesis H4 is accepted.

## Test 2: Variables by Boyer & Hult (2005)

The full SPSS output is presented in Appendix 5.

In order to investigate whether or not the hypotheses could be accepted or rejected and to determine to what extent the variables adopted from Boyer & Hult (2005), Service Quality and Product Quality, could explain the variance in Perceived Value, another regression analysis was carried out.

As can be seen in Table 15, the two variables from Boyer & Hult (2005) provided an explanatory degree of the variance in Perceived Value of 45,9%. Thereby, Service Quality and Product Quality, from Boyer & Hult (2005) could to a larger extent explain the variance in Perceived Value. This should be put in relation to the four variables from Marimon et al. (2009) who only could explain the variance by 34%.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,679 <sup>a</sup>	,461	,459	,57075

a. Predictors: (Constant), ProductQuality, ServiceQuality

b. Dependent Variable: PerceivedValue

**Table 15 - Regression 1 - Test 2 Explanatory degree**

In Table 16, the ANOVA table, the statistical significance is 0.000, which means that the results are statistically significant at a 0.05 level and that the risk of rejecting the null-hypothesis when it is true is 5%. The F-value (371,783) is thereby higher than the critical value of F.

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242,222	2	121,111	371,783	,000 <sup>b</sup>
	Residual	283,734	871	,326		
	Total	525,956	873			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), ProductQuality, ServiceQuality

**Table 16 - Regression 1 - Test 2 ANOVA**

Individually, the two variables were significant at the 95% level. The B-value is high for both variables, meaning that an increase by one unit in Service Quality and Product Quality, the increase in Perceived Value will be 0.344 respectively 0.386. Both variables had positive Beta values, which means that there is a positive relationship between the independent variables and the dependent; the strongest relationship between Product Quality and Perceived Value.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	(Constant)	,935	,105				8,895
1 ServiceQuality	,344	,027	,346	12,606	,000	,820	1,219
ProductQuality	,386	,023	,455	16,551	,000	,820	1,219

a. Dependent Variable: PerceivedValue

**Table 17 - Regression 1 - Test 2 Coefficients**

**4.3.2.5 Hypothesis H5: The Service Quality offered by the website is positively related to a customers Perceived Value of a website.**

Service Quality regards questions if the website is providing accessible, expected and good quality service through professional communication.

The fifth hypothesis tested was if Service Quality was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship provides a value of 0.539 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.539 indicates that the linear relationship is positive. When the customer assesses the quality of the service provided by the website, his or her perceived value is positively affected.

When studying Table 17, Service Quality was found to be significant with a coefficient of 0.000. The t-value (12.606) is remarkably higher than the accepted level of 1.96, which further strengthens the relationship between Service Quality and Perceived Value. Furthermore, the Beta-value (0.346) also reflects the significant relationship between the concepts. Studying the B-value, we can conclude that if Service Quality increases with one unit, the estimated increase in Perceived Value is 0.344. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Boyer & Hult (2005) Service Quality proved to have a significant effect on Behavioral Intentions and thereby the hypothesis was accepted in the context of a U.S online grocery store. Since the findings in our study, suggests that Service Quality is an important aspect of a positive Perceived Value, we might, to some extent, be able to strengthen the results of Boyer & Hult (2005). The reason to why Service Quality was found significant in this study might be that many of the respondents believed that one of the most important pros of buying groceries online was the fact that they could order the items whenever they want and that they got it home delivered (Table 7). Furthermore, since one of the most important cons was that customers did not have the possibility to see the products before buying them, the service quality of the employees choosing their products has to be reliable.

✓ Hypothesis H5 is accepted.

#### *4.3.2.6 Hypothesis H6: The Product Quality offered by the website is positively related to a customers Perceived Value of a website.*

Product Quality concerns range and quality of the products offered by the online grocery store.

The sixth hypothesis tested was if Product Quality was positively correlated to higher levels of Perceived Value. In Table 10, the correlation provided for this relationship provides a value of 0.608 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.608 indicates that the linear relationship is positive. When the customer assesses the product quality of the goods provided by the website, his or her perceived value is positively affected.

When studying Table 17, Product Quality was found to be significant with a coefficient of 0.000. The t-value (16.551) is remarkably higher than the accepted level of 1.96, which further strengthens the relationship between Product Quality and Perceived Value. Furthermore, the Beta-value (0.455) also reflects the significant relationship between the concepts. Studying the B-value, we can conclude that if Product Quality increases with one unit, the estimated increase in Perceived Value is 0.386. Finally, when taking the correlations matrix and the regression analysis in consideration, the hypothesis is accepted.

In Boyer & Hult (2005) Product Quality proved to have a significant effect on Customers Behavioral Intentions and thereby the hypothesis was accepted in the context of a U.S online grocery store. In this study, the hypothesis was accepted as well but on the impact of Perceived Value instead of Behavioral Intentions. Thereby, we cannot weaken or strengthen the results by Boyer & Hult (2005) but can still argue for the importance of the aspect. The fact that Product Quality was the second strongest correlation found in the entire hypothesis testing analysis (Table 10) indicates that the aspect is very important for the overall customer experience and satisfaction. Finally, one of the most important cons of buying groceries online was the fact that most customers wanted to see the products before buying them (Table 7). Thus, the importance of offering high product quality is essential to minimize the risk that the consumers experience when they are not able to touch or see the products beforehand.

- ✓ Hypothesis H6 is accepted.

#### 4.4.2 Multiple Regression Analysis – Stepwise Method

The full SPSS output is presented in Appendix 6.

Both regression analyses presented in the previous section have proved to some extent have an explanatory degree on Perceived Value. However, when looking at the first regression analysis performed, it did not provide as high of an explanatory degree as the second regression analysis (34% and 45,9%). Thus, it is interesting to combine these two models in order to see if the explanatory degree can be increased. Thereby, this regression analysis does not examine a specific hypothesis, but rather investigates all independent variables' effect on Perceived Value and what the result is when combining all six independent variables. In other words, the four concepts adopted from Marimon et al. (2009) and the two concepts from Boyer & Hult (2005).

The second conducted regression analysis was performed according to the stepwise method. In this method, variables are included in the analysis stepwise so that it is possible to conclude to what extent the R<sup>2</sup> increases when adding variables one at a time, creating new combinations. In this regression analysis, six independent variables were included; Efficiency, System Availability, Fulfillment, Privacy, Service Quality and Product Quality. The dependent variable was Perceived Value.

Six models were created in the stepwise regression analysis, the first one with an explanatory degree of the variance in Perceived Value with 36,4% and the last one with 50%. Thereby, we can see an increase in explanatory degree when more variables are included. However, when adding the four original variables from Marimon et al. (2009) in model number 3-6, the explanatory degree only increases with 3,8 percentage units, from 46,2% to 50%.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,604 <sup>a</sup>	,365	,364	,62188
2	,680 <sup>b</sup>	,463	,462	,57228
3	,700 <sup>c</sup>	,489	,488	,55837
4	,704 <sup>d</sup>	,495	,493	,55536
5	,707 <sup>e</sup>	,500	,498	,55290
6	,709 <sup>f</sup>	,503	,500	,55171

a. Predictors: (Constant), ProductQuality

b. Predictors: (Constant), ProductQuality, ServiceQuality

c. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency

d. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy

e. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability

f. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability, Fulfillment

g. Dependent Variable: PerceivedValue

**Table 18 - Regression 2 - Explanatory Degree**

In the ANOVA table, the statistical significance is 0.000 for all six models, which means that the results are statistically significant at the 0.05 level. In other words, the risk of rejecting the null-hypothesis when it is true is 5%. The F-values are thereby higher than the critical value of F.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	189,455	1	189,455	489,883	,000 <sup>b</sup>
	Residual	329,499	852	,387		
	Total	518,954	853			
2	Regression	240,247	2	120,123	366,783	,000 <sup>c</sup>
	Residual	278,707	851	,328		
	Total	518,954	853			
3	Regression	253,940	3	84,647	271,495	,000 <sup>d</sup>
	Residual	265,014	850	,312		
	Total	518,954	853			
4	Regression	257,102	4	64,276	208,400	,000 <sup>e</sup>
	Residual	261,852	849	,308		
	Total	518,954	853			
5	Regression	259,720	5	51,944	169,918	,000 <sup>f</sup>
	Residual	259,234	848	,306		
	Total	518,954	853			
6	Regression	261,139	6	43,523	142,987	,000 <sup>g</sup>
	Residual	257,815	847	,304		
	Total	518,954	853			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), ProductQuality

c. Predictors: (Constant), ProductQuality, ServiceQuality

d. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency

e. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy

f. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability

g. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability, Fulfillment

**Table 19 - Regression 2 - ANOVA**

Individually, all of the variables are significant on the 95% level. The B-value is the highest for Product Quality. If Product Quality increases with one unit, the estimated increase in Perceived Value is 0.514. The same goes for all significant independent variables and their effect on Perceived Value.

All of the variables have positive Beta values, which means that there is a positive relationship between the independent variables and the dependent; the strongest relationship concluded between Product Quality and Perceived Value. We can also conclude the relationship between the Beta value and the significance coefficient. The higher Beta value and lower significance coefficient, the larger effect on Perceived Value. This can be concluded when looking at Product Quality, Service Quality and Efficiency that all have higher Beta values than Fulfillment, Privacy and System Availability.



Furthermore, when investigating Service Quality and Product Quality individually, the two variables have remarkably higher B-values and Beta-values than the original four variables from Marimon et al. (2009). This can further be put into relation with Table 15, where Service Quality and Product Quality represents 46,2% of the total explanatory degree of 50%. Both variables adopted from Boyer & Hult (2005) should thereby be seen as highly important variables in the model.

Model		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,868	,081		22,994	,000		
	ProductQuality	,514	,023	,604	22,133	,000	1,000	1,000
2	(Constant)	,933	,106		8,807	,000		
	ProductQuality	,389	,024	,457	16,449	,000	,818	1,222
	ServiceQuality	,343	,028	,346	12,453	,000	,818	1,222
3	(Constant)	,739	,107		6,881	,000		
	ProductQuality	,340	,024	,399	14,030	,000	,742	1,348
	ServiceQuality	,278	,029	,281	9,741	,000	,723	1,383
	Efficiency	,172	,026	,193	6,627	,000	,711	1,407
4	(Constant)	,542	,123		4,392	,000		
	ProductQuality	,336	,024	,395	13,941	,000	,740	1,351
	ServiceQuality	,241	,031	,243	7,869	,000	,621	1,611
	Efficiency	,171	,026	,192	6,648	,000	,711	1,407
	Privacy	,085	,027	,087	3,202	,001	,796	1,256
5	(Constant)	,440	,128		3,448	,001		
	ProductQuality	,339	,024	,399	14,115	,000	,739	1,353
	ServiceQuality	,227	,031	,229	7,355	,000	,606	1,650
	Efficiency	,135	,029	,151	4,714	,000	,574	1,744
	Privacy	,079	,027	,081	2,967	,003	,791	1,264
	SystemAvailability	,076	,026	,087	2,926	,004	,667	1,498
6	(Constant)	,303	,142		2,127	,034		
	ProductQuality	,332	,024	,391	13,751	,000	,727	1,376
	ServiceQuality	,210	,032	,211	6,569	,000	,566	1,767
	Efficiency	,134	,028	,150	4,697	,000	,573	1,744
	Privacy	,075	,027	,077	2,814	,005	,787	1,271
	SystemAvailability	,068	,026	,078	2,613	,009	,655	1,527
	Fulfillment	,067	,031	,060	2,159	,031	,756	1,323

a. Dependent Variable: PerceivedValue

Table 20 - Regression 2 - Coefficients

Finally, when looking at the stepwise regression analysis, including all independent variables, the explanatory degree has increased from 34% in Test 1 and 45,9% in Test 2, to 50% in this stepwise regression analysis. Thereby, it can be argued that the two independent variables adopted from Boyer & Hult (2005) should be added to the model by Marimon et al. (2009). The explanatory degree of the variance in Perceived Value increases when combining the variables in the last conducted regression analysis presented in this section.

### 4.4.3 Bivariate Regression Analysis

To be able to investigate the independent variable's effect on the dependent variable, Hypothesis H7 and Hypothesis H8, we performed so called bivariate linear regression analysis (Malhotra, 2010:568). In contrast to the multiple regression analysis, a bivariate regression analysis only includes one independent variable (Malhotra, 2010:577). The two hypotheses investigated with bivariate analysis in this study are; Perceived Value's effect on Loyalty (H7) and Loyalty's on Actual Purchases (H8) (Malhotra, 2010:568).

#### 4.4.3.1 Hypothesis H7: Higher levels of Perceived Value in a website are positively related to higher levels of Loyalty with regard to that website.

The full SPSS output is presented in Appendix 7.

Perceived Value regards the overall feeling of how economical the site is, the overall feeling of convenience the site provides, the extent to which the consumer feels in control and the overall value he or she gets for the money and effort spent on the site.

The seventh hypothesis tested was if Perceived Value was positively correlated to higher levels of Loyalty. In Table 10, the correlation provided for this relationship provides a value of 0.681 with a significance level of 0.01. This level is higher than the accepted level of 0.05. Furthermore, the correlation coefficient of 0.681 indicates that the linear relationship is positive. This relationship is the strongest of all correlations found in the hypothesis testing (Table 10). When the customer assesses the overall perceived value of the website, his or her feelings of loyalty is positively affected.

According to Table 21, Perceived Value provided an explanatory degree of the variance in Loyalty of 46,3%.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,681 <sup>a</sup>	,463	,463	,68305

a. Predictors: (Constant), PerceivedValue

b. Dependent Variable: Loyalty

**Table 21 - Bivariate 1 - Explanatory degree**

In Table 22, the ANOVA table, the statistical significance is 0.000, which means that the results are statistically significant at a 0.05 level. In other words, the risk of rejecting the null-hypothesis when it is true is 5%. The F-value (768,252) is thereby higher than the critical value of F.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	358,436	1	358,436	768,252	,000 <sup>b</sup>
1 Residual	415,239	890	,467		
Total	773,675	891			

a. Dependent Variable: Loyalty

b. Predictors: (Constant), PerceivedValue

**Table 22 - Bivariate 1 - ANOVA**

Perceived Value was significant at the 95% level. The B-value is relatively high. An increase by one unit in Perceived Value generates an increase in Loyalty with 0.811. Perceived Value had a positive Beta value (0.681), which means that there is a positive relationship between Perceived Value and Loyalty. Furthermore, the t-value (27.717) is also remarkably higher than the accepted level of 1.96. The Beta value further indicates the strength of the relationship.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
	1	(Constant)	,966			,108		8,964
	PerceivedValue	,811	,029	,681	27,717	,000	1,000	1,000

a. Dependent Variable: Loyalty

**Table 23 - Bivariate 1 - Coefficients**

In Marimon et al. (2009) Perceived Value proved to have a significant effect on Loyalty and thereby the hypothesis was accepted in the context of a Spanish online grocery store. Since the findings in our study, also suggests that Perceived Value is an important aspect of positive feelings of Loyalty, we might be able to strengthen the results of Marimon et al. (2009), who also found this correlation to be the strongest of all relationships. The similarities in the results might be explained by the fact that if a customer has high levels of satisfaction, he or she is more likely to be willing to do business with the website in the future. Thus, stay loyal.

Finally, the fact that Perceived Value could explain the variance in Loyalty to a degree of 46,3% should be seen as rather high since the six combined independent variables in the first regression analysis could explain the variance in Perceived Value to a degree of 50%. Furthermore, the correlation between Perceived Value and Loyalty was the strongest (0.681) of all relationships, which could explain why the R<sup>2</sup> presented in this regression analysis is high.

- ✓ Hypothesis H7 is accepted.

**4.4.3.2 Hypothesis H8: Higher levels of Loyalty with regard to a website are positively related to higher levels of Actual Purchases on that website.**

The full SPSS output is presented in Appendix 8.

The Loyalty concept is regarding if the customer is willing to say positive things and recommend the site to others, encourage others to use it, consider it to be his or her first choice and willingness to do business with the site in the coming months.

The Actual Purchases concept measures the number of online orders as well as the total value of online orders. The data is self-reported in this study, which differs from Marimon et al. (2009) who used actual data of sales from a customer database.

The eighth and final hypothesis tested was if Loyalty was positively correlated to higher levels of Actual Purchase. In Table 10, the correlation provided for the relationship between Loyalty and how much money the customer has spent on the website provides a value of 0.094 with a significance level of 0.01. This level is higher than the accepted level of 0.05.

For the relationship between Loyalty and how many orders the customer has made with the website, the correlation is 0.237 with a significance level of 0.01. The level is <0.05, which means that the correlations are significant.

Furthermore, the correlation coefficient of 0.094 and 0.237 indicates that the linear relationship is positive. When the customers have positive feelings of loyalty, his or her levels of actual purchases are positively affected.

The second and final bivariate regression analysis was performed in order to investigate whether or not the hypothesis could be accepted or rejected and to determine to what extent Loyalty could explain the variance in Actual Purchases. In this analysis, the variables “How many times have you ordered groceries from Coop Online” and “How much have your household spent on groceries from Coop Online” were analyzed separately since they did not prove to be correlated enough to be combined to one variable.

According to Table 24, Loyalty provided an explanatory degree of the variance in “How many times have you ordered groceries from Coop Online” by 5,5 %. Secondly, according to Table 25, Loyalty could explain the variance in “How much have you spent on groceries from Coop Online” by 0.8%. Both of these numbers can be seen as a rather low and are lowest of all regression analyses performed.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,237 <sup>a</sup>	,056	,055	,703

a. Predictors: (Constant), Loyalty

**Table 24 - Bivariate 2 - Explanatory degree 1**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,094 <sup>a</sup>	,009	,008	,753

a. Predictors: (Constant), Loyalty

**Table 25 - Bivariate 2 - Explanatory degree 2**

In Table 26 and Table 27, the ANOVA tables, the statistical significance is 0.000 and 0.007, which means that the results are statistically significant at the 0.05 level. In other words, the risk of rejecting the null-hypothesis when it is true is 5%. The F-values (51,833 and 7,256) is thereby higher than the critical values of F.

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	25,594	1	25,594	51,833	,000 <sup>b</sup>
Residual	430,572	872	,494		
Total	456,166	873			

a. Dependent Variable: Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

b. Predictors: (Constant), Loyalty

**Table 26 - Bivariate 2 - ANOVA 1**

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4,115	1	4,115	7,256	,007 <sup>b</sup>
Residual	458,261	808	,567		
Total	462,377	809			

a. Dependent Variable: Howmuchapproximatelyhaveyourhouseholdspentongroceries

b. Predictors: (Constant), Loyalty

**Table 27 - Bivariate 2 - ANOVA 2**

According to Table 28 and Table 29, Loyalty was significant at the 95% level. An increase by one unit in Loyalty will provide an increase in Actual Purchases of 0.184 (how many orders) and 0.076 (how much money spent), which could be seen as relatively low. Both “How many orders” and “How much money spent” had positive Beta values, which indicates that there is a positive relationship between Loyalty and Actual Purchases. The t-values (7.199 & 2.694) are both higher than the accepted level of 1.96. Taking the correlations matrix and the regression analyses performed into consideration, Hypothesis H8 are accepted.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF	
	1	(Constant)	1,210			,102				11,850
	Loyalty	,184	,025	,237	7,199	,000	,134	,234	1,000	1,000

a. Dependent Variable: Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

**Table 28 - Bivariate 2 - Coefficients 1**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF	
	1	(Constant)	1,216			,113				10,730
	Loyalty	,076	,028	,094	2,694	,007	,021	,132	1,000	1,000

a. Dependent Variable: Howmuchapproximatelyhaveyourhouseholdspentongroceries

**Table 29 - Bivariate 2 - Coefficients 2**

The results are in line with Marimon et al. (2009) who also found a low R<sup>2</sup>. This suggests that other factors might have to be included in the full model that can better explain the variance in Actual Purchases. However, it should be emphasized that the correlation between Loyalty and Actual Purchases is significant and thus a relationship exist.

In Marimon et al. (2009) Loyalty proved to have a significant effect on Actual Purchases and thereby the hypothesis was accepted in the context of a Spanish online grocery store. Since the findings in our study, also suggests that Loyalty is an important aspect of a higher levels of Actual Purchases, we might be able to further strengthen the results of Marimon et al. (2009). An explanation to why this relationship was found might be that loyal customers are more willing to do repeat business with the specific company. Thus, higher levels of money spent and repeat orders will be done with that specific online grocery store.

The reason to why the correlation coefficients are relatively low might be the fact that most customers rank the aspect that the products are more expensive than in the physical store, as one of the most important cons of buying groceries online (Table 7).

This critical view might affect Actual Purchases even if the customer considers him or herself loyal.

Loyalty could explain the variance in Actual Purchases to a degree of 5,5% and 0,8%, which should be seen as relatively low. Loyalty seems to have a greater effect on how many times a customer has made an order than on how much the customer has spent. The reason to this might be how the questions about Actual Purchases were formulated in the survey. The question about "How many orders" was regarding the entire previous year while the question regarding "How much money had been spent" was concerning a monthly average. Thereby, the results might be skewed to the benefit of "how many times" since they will be placed relatively higher on the scale.

- ✓ Hypothesis H8 is accepted.



## 5. DISCUSSION & CONCLUSION

### 5.1 Theoretical Implications

Our study aimed at analyzing what aspects contribute to actual sales for retailers selling groceries online. To be able to fulfill the aim of the study, a sample of Swedish urban consumers was selected. The sample consisted of customers of the Swedish online grocery store, Coop Online, who helped us distribute the web survey through their customer database. The questions presented to the respondents were adopted from Marimon et al. (2009) and Boyer & Hult (2005). Marimon et al. (2009) was used as the basis model for our study, while we chose to add two concepts from Boyer & Hult (2005); in order to further improve the understanding of actual sales in online grocery retailing. The two added concepts were Service Quality and Product Quality, since their importance have been emphasized by many researchers (Wolfenbarger & Gilly, 2003, Parasuraman, Zeithaml & Malhotra, 2005, Rasmus & Nielsen, 2005). The questions were modified in order to be applicable for Coop Online and translated into Swedish. In accordance with the above-mentioned researchers, we also decided to use the same hypotheses as the basis for our study.

To be able to investigate whether or not our hypotheses could be accepted or rejected, a correlation and regression analysis was performed (see section 4.3.1). The eight hypotheses all proved to be significant and were consequently accepted. This was a rather surprising result since Marimon et al. (2009) did not find a relationship between either Efficiency and Perceived Value (H1) or Privacy and Perceived Value (H4). One can argue that we thereby can weaken the results of Marimon et al. (2009). However, since this study is not a replica and the context differs, we should be careful when making conclusions about strengthening or weakening the results. In the context investigated in this study, H1 and H4, proved to have a statistically significant proven relationship with Perceived Value and could thus be considered to be of importance. Since all of the hypotheses were accepted, an indication of the differences between the Swedish and Spanish market characteristics and consumers can be concluded.

This study was carried out in corporation with Coop Online and the questions asked to the respondents were thus regarding that specific company. Thereby, a possibility to generalize to other companies in the Swedish online grocery market might be limited. However, we can argue that the replies to the first questions presented to the respondents, regarding pros and cons about ordering groceries online in general, to a large extent corresponds to the results of Svensk Distanshandel (2013). Thus, the study might be able to contribute to valuable insights in the Swedish online grocery market as a whole.

The fact that the added concepts, Service Quality (H5) and Product Quality (H6), from Boyer & Hult (2005) proved to correlate to Perceived Value argues that both are important aspects to further investigate.

In order to investigate the effect of the independent variables on Perceived Value, a regression analysis was carried out. This part of the analysis chapter was of great importance since new and valuable insights were found. Looking at the results, the two added variables from Boyer & Hult (2005) together proved to have a higher explanatory degree than the four variables from Marimon et al. (2009) together could achieve. The fact that the two variables from Boyer & Hult (2005) had an explanatory degree of 45,9% compared to Marimon et al. (2009) of 34% highly motivates the importance and power of these two variables. Thereby, a combination of all six independent variables was tested in a regression analysis. The combination of the six variables has not been tested before and should thereby be seen as a new model, which is the main

contribution of this study. The results from the regression analysis showed an explanatory degree of the variance in Perceived Value of 50%. Thus, the combination of all six should be kept in order to achieve as high of an explanatory degree as possible based on these two models.

However, some variables proved to have higher impact than others. In the step-wise regression analysis, we could conclude that Product Quality and Service Quality accounted for 46,2%. When adding the remaining four variables, the explanatory degree only increased to 50%, which might indicate a rather low impact on Perceived Value.

The next step in our research was to look at how Perceived Value influenced Loyalty (H7). This relationship was found to be the strongest of all correlations, providing a correlation coefficient of 0.681. The explanatory degree to which Perceived Value could explain the variance in Loyalty was 46,3%, which could be considered to be high. These results are in accordance with Marimon et al. (2009) who also found this relationship to be the strongest of all in the model. We find this result not to be very surprising since it can be seen as a rather logical relation between a satisfied customer, with a high perceived value, contributing to increased incentives to stay loyal to that specific company.

The final step in the research was to look at how Loyalty influenced Actual Purchases (H8). In this case, we had to investigate the items “How many times have you (approximately) ordered groceries from Coop Online during the last year?” and “How much (approximately) have your household spent on groceries from Coop Online in average per month during the last year?” separately. Loyalty had a higher ability to explain the variance in “How many times” (5,5%) than in “How much money” (0,8%). This can be explained by the way the questions were presented to the respondents. It would have been advantageous to ask the questions concerning the same time of reference. Instead, they were formulated in years respectively months, which resulted in a difficulty for us to make them comparable. The question regarding orders scored much higher on the scale than the question about money spent since it was asked about the entire year. Unfortunately this was not considered in the beginning stages of the study but is a valuable insight for our further research. Furthermore, the results are in accordance with Marimon et al. (2009) who also found this relationship to be the weakest. A reason to why both studies have found low results in this relationship, might be that other aspects contributes to Actual Purchases which are external to this study.

Looking at the results of this study, we can conclude that the addition of Service Quality and Product Quality to the model by Marimon et al. (2009) increases the explanatory degree of the variance in Perceived Value. This insight is of great value and provides an answer to what aspects are of importance for achieving actual sales when retailing with groceries online. The insights gained from this study are of relevance for both practitioners as well as academics.

It is of great importance for practitioners to be aware of what aspects are important for consumers when selling groceries online so that the strategy is formulated accordingly. The importance of Service Quality and Product Quality should, according to the results in this study, not be neglected. Rather, it could be an idea to invest more time and resources in them, since they, to a larger extent, contributes to Perceived Value than Efficiency, System Availability, Fulfillment and Privacy.

Academically, the results are of relevance since the research available in this field is rather limited and thereby this study covers a gap in the field. A new model, with higher explanatory degree of the variance in Perceived Value, has been suggested. However, the model can be developed in order to increase the explanatory degree of Actual Purchases, the final step in the model.

Finally, our main theoretical conclusions are:

- The concepts from Marimon et al. (2009) all proved to have a significantly positive effect on Perceived Value.
- The concepts from Boyer & Hult (2005) both proved to have a significantly positive effect on Perceived Value.
- Perceived Value has a positive effect on Loyalty.
- Loyalty has a positive effect on Actual Purchases.
- The concepts, Service Quality & Product Quality adopted from Boyer & Hult (2005) could be added to the model by Marimon et al. (2009), for a better understanding of actual purchases in online grocery retailing.

## 5.2 Practical Implications

In this study, valuable insights have been gained, of practical use for both Coop Online as well as other online grocery retailers in Sweden. Since the sample is based on Coop Online we cannot make a statistical generalization. However, an analytical generalization will be presented and discussed.

Efficiency, System Availability, Fulfillment and Privacy are all important aspects for the overall perceived value of consumers buying groceries online. Thereby, to be able to offer a well-structured and technically reliable webpage at the same time as offering convenient deliveries and protecting information about the customers are of importance. However, the relationship between Efficiency and Perceived Value was found to be stronger than the others. In the case of Coop Online, further improvement could be made to the Efficiency factor since it was evaluated relatively lower than the other concepts (Table 8). Additional focus should thus be put in creating a user-friendly and well-structured web page. Regarding the other three concepts, the means (Table 8) were relatively high and thus Coop Online should maintain and monitor their good performance in these factors.

Service Quality and Product Quality are found to be even more important aspects for consumers buying groceries online. For online grocery retailers to be able to provide highly dependable service as well as a large range and high quality products is crucial for success. These two aspects have a large effect on the customer's overall perceived value and thereby they are of great importance and should be emphasized when formulating strategy. Looking at the concept means (Table 8) of Service Quality and Product Quality we can conclude a great possibility for Coop Online to further improve their service as well as their offered product range and product quality.

To be able to make sure the customer has as high level of perceived value as possible, retailers should make sure that all six of the above mentioned factors are being continuously monitored and invested in. Regarding the consumers' perceived value of Coop Online, we can conclude that consumers feel a great convenience of using the site. However, they experience the pricing to be relatively too high which contributes to a negative effect on the overall perceived value. A decrease in prices might thus increase the customers' overall perceived value. Another possibility is to further develop the convenience aspect of the services offered and thus motivate a higher price.

The strongest relationship found in this study was the one between perceived value and loyalty. Thus, getting a good assessment from consumers on the factors leading to perceived value highly increases the possibilities to obtain loyal customers. Furthermore, getting loyal customers is vital since we have found a relationship between loyal customers and increased actual sales.

### 5.3 Limitations and Future Research

One obvious limitation of this study is concerning the possibility to generalize our results. Since this study is based on one single company it could be argued that the results are company specific and thus cannot be generalized to other companies in the online grocery market in Sweden. Our sample is based on Swedish consumers in urban areas, and thereby the possibility to generalize beyond urban areas could also be discussed. However, this study is aimed at providing insights regarding what is important for creating actual sales of groceries online and this knowledge should still be viewed as accurate and valuable regardless of the sample.

In order to further test the validity and reliability of the new model created in this study, testing it in other geographical markets as well as with other companies might be interesting. Comparing the results of this study with other sampling techniques might generate additional insights.

As mentioned in the section 5.1, the two questions regarding Actual Purchases can preferably be formulated in other ways in order to make them more comparable. Being able to compare them better with each other, as well as with the other questions in the study is of great interest and should be prioritized in future research. Furthermore, using actual data of Actual Purchases, as can be found in for example customer databases might be interesting to use instead of self-reported data, as been used in this study. The possibility to see the exact number of orders and money spent instead of what the customers believe that they have spent should be considered to be more accurate. Furthermore, in Marimon et al. (2009) the data about Actual Purchases is actual data contained from a customer database, in this study this data is self-reported. This means that we only have the customers own estimation of what he or she has spent and how many orders has been placed, which could differ from the actual data.

One of the first questions asked in this study was concerning if the respondents had ordered a pre-composed or self-composed grocery bag. Future research could investigate whether or not customers assess important aspects differently depending on which of these two grocery bags they order.

When investigating the concept Service Quality, adopted from Boyer & Hult (2005) it could be placed in different steps of the model. We decided to place it before Perceived Value but it was more correlated to Loyalty. The difference was very small; 0.539 to Perceived Value and 0.542 to Loyalty. The decision to place it before Perceived Value was made in order to be able to compare the independent variables to a larger extent. It might be interesting to place it before Loyalty to see what the impact on the model as a whole might be.

The explanatory degree of which the independent variables could explain Perceived Value of 50% might be further investigated in order to provide an increase. It is possible that other variables might be included or that existing variables should be further developed.

The most central suggestion for further research is to find other, external aspects that could contribute to a higher explanatory degree of the variance in Actual Purchase. Another possibility is to look at the already existing variables and investigate whether or not they can be further developed in order to provide a better fit of the model as a whole.

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## 8. APPENDIX

### 8.1 Appendix 1: Pre Study 1

#### Pilotstudie - E-handel med livsmedel

Detta är en pilotstudie utformad för att reducera antalet frågor till en framtida större undersökning om e-handel med matvaror. Undersökningen kommer att ligga till underlag för forskning på masternivå i marknadsföring på Lunds universitet.

**Har du handlat matvaror på internet i form av färdigkomponerad matkasse? \***

Exempelvis: linasmatkasse.se, middagsfrid.se mm.

- Ja
- Nej

**Har du handlat matvaror på internet genom att själv välja ut produkter (tex. mjölk eller kött) ur sortimentet?\***

Exempelvis: mathem.se, mat.se mm.

- Ja
- Nej

#### Effektivitet\*

Kryssa för de 4 frågor du anser vara viktigast när du handlar matvaror online.

- EFF1 Hemsidan gör det lätt att hitta vad jag behöver.
- EFF2 Det är lätt att navigera på hemsidan.
- EFF3 Det är möjligt att genomföra en transaktion snabbt.
- EFF4 Informationen på hemsidan är välorganiserad.
- EFF5 Hemsidan laddar snabbt.
- EFF6 Hemsidan är enkel att använda.
- EFF7 Det går snabbt att komma in på hemsidan.
- EFF8 Hemsidan är välorganiserad.

#### Systemtillgänglighet\*

Kryssa för de 2 frågor du anser vara viktigast när du handlar matvaror online

- SYA1 Hemsidan är alltid tillgänglig för köp.
- SYA2 När jag går in på hemsidan fungerar den direkt.
- SYA3 Hemsidan kraschar inte.
- SYA4 Sidor på hemsidan fryser inte till efter att jag har lagt min beställning.

#### Hemsidans utförande\*

Kryssa för de 3 frågor du anser vara viktigast när du handlar matvaror online.

- FUL1 Hemsidan levererar varor vid utlovad tid.
- FUL2 Hemsidan har varor tillgängliga för leverans inom en rimlig tidsram.
- FUL4 Hemsidan skickar ut de rätta varorna jag beställt.
- FUL5 Hemsidan har de varor på lager som de hävdar att de har.
- FUL6 Hemsidan är ärliga med sina erbjudanden.
- FUL7 Erbjuden leveranstid är bekväm för mig.

#### Integritet\*

Kryssa för de 2 frågor du anser vara viktigast när du handlar matvaror online.

- PRI1 Hemsidan skyddar information om mitt shoppingbeteende online.
- PRI2 Hemsidan delar inte min personliga information med andra företag.
- PRI3 Hemsidan skyddar information om mitt kreditkort.

**Servicekvalitet\***

Kryssa för de 5 frågor du anser vara viktigast när du handlar matvaror online.

- SQ1 Hemsidans anställda är pålitliga vad gäller att ge den service jag förväntar mig.
- SQ2 Hemsidans anställda är förstående inför mina servicebehov.
- SQ3 Hemsidans anställda är mottagliga inför mina serviceförfrågningar.
- SQ4 Hemsidans anställda är kunniga i att erbjuda förväntad service.
- SQ5 Jag känner mig säker i min servicekontakt med hemsidans anställda.
- SQ6 Hemsidans anställda är artiga när de erbjuder mig service.
- SQ7 Hemsidans anställda är tillgängliga för att besvara mina frågor.
- SQ8 De påtagliga aspekterna av hemsidans service (såsom leveransfordon, personal, produkter mm.) är utmärkta.
- SQ9 Hemsidans har god trovärdighet att tillhandahålla den service jag behöver.
- SQ10 Jag kan enkelt kommunicera med hemsidan angående mina servicebehov.

**Produktkvalitet\***

Kryssa för de 3 frågor du anser vara viktigast när du handlar matvaror online.

- PQ1 Hemsidan har prestigefulla produkter av hög kvalitet.
- PQ2 Hemsidan har ett utmärkt produktsortiment.
- PQ3 Hemsidans produkter är bland de bästa.
- PQ4 Hemsidan har ett tillräckligt stort sortiment av produkter (Jag kan få vad jag vill ha).
- PQ5 Produkterna är av likvärdig kvalitet som de produkter jag kan få i en fysisk butik.
- PQ6 Ersättningsprodukter eller produkter som inte finns på lager är av ett rimligt antal.

**Upplevt värde\***

Kryssa för de 2 frågor du anser vara viktigast när du handlar matvaror online.

- PEV1 Tillgängliga produkter och tjänster på hemsidan är prisvärda.
- PEV2 Att använda de tjänster som hemsidan erbjuder är sammantaget bekvämt.
- PEV3 Hemsidan ger mig en känsla av att vara i kontroll.
- PEV4 Den ansträngning och de pengar jag spenderar på hemsidan ger mig ett högt värde.

**Lojalitet\***

Hur skulle du bäst beskriva din lojalitet till hemsidan? Kryssa för de 3 mest relevanta.

- LOY1 Jag säger positiva saker om hemsidan till andra.
- LOY2 Jag rekommenderar hemsidan till de som rådfrågar mig.
- LOY3 Jag uppmanar vänner och bekanta att handla från hemsidan.
- LOY4 Denna hemsida är mitt förstahandsval för framtida transaktioner.
- LOY5 Jag kommer att handla mer från hemsidan under de kommande månaderna.

## 8.2 Appendix 2: Pre Study 2

### Pilotstudie - E-handel med livsmedel

Detta är en pilotstudie utformad för att testa frågor till en framtida större undersökning om e-handel med matvaror. Undersökningen kommer att ligga till underlag för forskning på masternivå i marknadsföring på Lunds universitet.

**Detta formulär riktar sig enbart till personer som har handlat matvaror online. Har du inte handlat matvaror online, vänligen stäng ner formuläret! Tack!**

Har du handlat matvaror på internet i form av färdigkomponerad matkasse? \*

Exempelvis: linasmatkasse.se, middagsfrid.se mm.

- Ja  
 Nej

Har du handlat matvaror på internet genom att själv välja ut produkter (tex. mjölk eller kött) ur sortimentet?\*

Exempelvis: mathem.se, mat.se mm.

- Ja  
 Nej

Hur många gånger (uppskattningsvis) har du handlat matvaror online under år 2013?\*

- 1-2 gånger  
 3-6 gånger  
 7+ gånger

Hur mycket (uppskattningsvis) har ditt hushåll spenderat på matvaror online i genomsnitt per månad under år 2013?\*

- 1 - 2000 kr  
 2000 - 3999 kr  
 4000 - 4999 kr  
 5000 - 5999 kr  
 6000 kr +

Kön\*

- Man  
 Kvinna

Alder\*

- 20-29 år  
 30-39 år  
 40-49 år  
 50-59 år  
 60+ år

Utbildning\*

Välj din högst erhållna utbildning

- Grundskola  
 Gymnasial utbildning  
 Högskola / Universitetsutbildning

Hushållsstorlek\*

Kryssa för hur många personer som finns i ditt hushåll

- 1 personer  
 2 personer  
 3 personer  
 4 personer  
 5+ personer

Bor du i ett tätbebyggt område?\*

- Ja  
 Nej

Har du tillgång till bil för att utföra dina matvaruinköp?\*

- Ja  
 Nej

## Vänligen kryssa för det alternativ du anser stämma överens med din åsikt

### Effektivitet

**EFF1 Hemsidan gör det lätt att hitta vad jag behöver. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**EFF2 Det är lätt att navigera på hemsidan.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**EFF3 Det är möjligt att genomföra en transaktion snabbt. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**EFF6 Hemsidan är enkel att använda.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**EFF8 Hemsidan är välorganiserad. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

### Systemtillgänglighet

**SYA1 Hemsidan är alltid tillgänglig för köp.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SYA2 När jag går in på hemsidan fungerar den direkt. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

## Hemsidans utförande

**FUL1 Hemsidan levererar varor vid utlovad tid. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**FUL4 Hemsidan skickar ut de rätta varorna jag beställt. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**FUL7 Erbjuden leveranstid är bekväm för mig. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

## Integritet

**PRI2 Hemsidan delar inte min personliga information med andra företag. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**PRI3 Hemsidan skyddar information om mitt kreditkort. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

## Servicekvalitet

**SQ1 Hemsidans anställda är pålitliga vad gäller att ge den service jag förväntar mig. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SQ3 Hemsidans anställda är mottagliga inför mina serviceförfrågningar. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SQ4 Hemsidans anställda är kunniga i att erbjuda förväntad service. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SQ7 Hemsidans anställda är tillgängliga för att besvara mina frågor. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SQ9 Hemsidans har god trovärdighet att tillhandahålla den service jag behöver. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**SQ10 Jag kan enkelt kommunicera med hemsidan angående mina servicebehov. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

Produktkvalitet

**PQ2 Hemsidan har ett utmärkt produktsortiment.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**PQ4 Hemsidan har ett tillräckligt stort sortiment av produkter (Jag kan få vad jag vill ha).\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**PQ5 Produkterna är av likvärdig kvalitet som de produkter jag kan få i en fysisk butik. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

Upplevt värde

**PEV1 Tillgängliga produkter och tjänster på hemsidan är prisvärda. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**PEV2 Att använda de tjänster som hemsidan erbjuder är sammantaget bekvämt. \***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**PEV4 Den ansträngning och de pengar jag spenderar på hemsidan ger mig ett högt värde.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

Lojalitet

**LOY1 Jag säger positiva saker om hemsidan till andra.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**LOY2 Jag rekommenderar hemsidan till de som rådfrågar mig.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**LOY5 Jag kommer att handla mer från hemsidan under de kommande månaderna.\***

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**Är det något du vill lägga till?**

Synpunkter på formuläret

## 8.3 Appendix 3: Final Questionnaire – Coop Online

### Konsumentundersökning

Detta är en undersökning gällande din attityd kring e-handel med matvaror. Dina svar är anonyma och kommer att behandlas konfidentiellt.

Undersökningen kommer att utgöra underlag för forskning på masternivå i marknadsföring på Lunds universitet. Resultaten av undersökningen kommer att publiceras i form av en masteruppsats tillgänglig via Lunds universitet.



#### Har du handlat Coop Onlines Matkasse? \*

Färdigkomponerad matkasse med middagslösningar.

- Ja
- Nej

#### Har du handlat matvaror på Coop Online genom att själv välja ut produkter ur sortimentet?\*

T.ex. mjölk eller kött.

- Ja
- Nej

#### Vilka anser du vara de största fördelarna med att handla mat på Coop Online?

Välj de tre alternativ du anser vara viktigast.

- Jag får varorna hemlevererade och slipper bära hem dem
- Jag vinner tid
- Jag slipper trånga och stökiga butiker
- Jag kan göra min beställning när jag vill
- Jag gör färre impulsköp och det blir därför billigare
- Jag får ny inspiration eftersom jag får nya recept
- Jag får lösningen på veckans middagsproblem levererad hem
- Jag får ett större sortiment att välja från
- Varorna jag köper online är av högre kvalitet än de jag kan köpa i en fysisk butik
- Det finns inga fördelar
- Övrigt:



**Vilka anser du vara de största nackdelarna med att handla mat på Coop Online?**

Välj de tre alternativ du anser vara viktigast.

- Jag vill se min mat innan jag köper den
- Kostnad för frakt
- Jag tycker att det är roligt att handla i butik
- Varorna är dyrare än i livsmedelsbutiken
- Jag vill ha min mat direkt och inte vänta på leverans
- Jag litar inte på att kvaliteten är lika bra som i butik
- Jag får bättre service i en fysisk butik
- Internetbutikerna har inte hemleverans på min ort
- Jag fortsätter handla i vanliga butiker av gammal vana
- Det är krångligt, hemsidorna är inte användarvänliga
- De leveranstider som erbjuds passar inte mig
- Det finns inga nackdelar
- Varorna jag köper online är av sämre kvalitet än de jag kan köpa i en fysisk butik
- Jag litar inte på e-handel
- Övrigt:

**Hur många gånger (uppskattningsvis) har du handlat matvaror från Coop Online under det senaste året?\***

- 1 - 2 gånger
- 3 - 6 gånger
- 7+ gånger
- Vet ej

**Hur mycket (uppskattningsvis) har ditt hushåll spenderat på matvaror från Coop Online i genomsnitt per månad under det senaste året?\***

- 1 - 2000 kr
- 2000 - 3999 kr
- 4000 - 4999 kr
- 5000 - 5999 kr
- 6000 kr +
- Vet ej

**Har du handlat från någon annan matvarubutik online? \***

Genom färdigkomponerad matkasse eller genom att själv välja ut produkter ur sortimentet.

- Ja
- Nej

## Demografisk Information

### Kön\*

- Man
- Kvinna

### Alder\*

- 20-29 år
- 30-39 år
- 40-49 år
- 50-59 år
- 60-69 år
- 70+ år

### Utbildning\*

Välj högst erhållen utbildning.

- Grundskola
- Gymnasial utbildning
- Högskola / Universitetsutbildning

### Hushållsstorlek\*

Kryssa för antalet personer i ditt hushåll.

- 1 personer
- 2 personer
- 3 personer
- 4 personer
- 5+ personer

### Har du tillgång till bil för att utföra dina matvaruinköp?\*

Vid majoriteten av gångerna.

- Ja
- Nej

### Vänligen ange ditt postnummer.

Utan mellanslag.

## Vänligen kryssa för det alternativ du anser stämma överens med din åsikt

Om du inte vill eller kan svara på en fråga, vänligen lämna denna obesvarad.



1. Coop Onlines hemsida gör det lätt att hitta vad jag behöver.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

2. Jag anser att det är lätt att navigera på Coop Onlines hemsida.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

3. Jag anser att det är möjligt att genomföra en transaktion snabbt på Coop Onlines hemsida.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

4. Enligt mig är Coop Onlines hemsida enkel att använda.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

5. Jag anser att Coop Onlines hemsida är välorganiserad.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

6. Jag upplever att Coop Onlines hemsida alltid är tillgänglig för köp.

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**7. När jag går in på Coop Onlines hemsida fungerar den direkt.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**8. Jag upplever att Coop Online levererar varor vid utlovad tid.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**9. Coop Online skickar ut de rätta varorna jag beställt.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**10. Coop Onlines erbjudna leveranstid är bekväm för mig.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**11. Jag upplever att Coop Online inte delar min personliga information med andra företag.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**12. Jag upplever att Coop Online skyddar information om mitt kreditkort.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**13. Coop Onlines anställda är pålitliga vad gäller att bistå med den service jag förväntar mig.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**14. Coop Onlines anställda är mottagliga inför mina serviceförfrågningar.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**15. Jag anser att Coop Onlines anställda är kompetenta i att erbjuda förväntad service.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**16. Coop Onlines anställda är tillgängliga för att besvara mina frågor.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**17. Coop Online har god trovärdighet gällande att tillhandahålla den service jag behöver.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**18. Jag kan enkelt kommunicera med Coop Online angående mina servicebehov.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**19. Jag anser att Coop Online har ett utmärkt produktsortiment.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**20. Coop Online har ett tillräckligt brett sortiment av produkter (Jag kan få vad jag vill ha).**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**21. Coop Onlines produkter är av likvärdig kvalitet som de produkter jag kan få i en fysisk butik.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**22. Jag anser att tillgängliga produkter och tjänster på Coop Online är prisvärda.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**23. Att använda de tjänster som Coop Online erbjuder är för mig sammantaget bekvämt.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**24. Den ansträngning och de pengar jag spenderar på Coop Online ger mig ett högt värde.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**25. Jag säger positiva saker om Coop Online till andra.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**26. Jag rekommenderar Coop Online till de som rådfrågar mig.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**27. Jag kommer att handla från Coop Online under de kommande månaderna.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**28. Jag upplever att Coop Onlines tjänster och produkter motsvarar mina förväntningar.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**29. Att kunna hämta upp varor i butik som jag beställt online är för mig mycket tilltalande.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**30. Att kunna hämta upp varor i en "drive through" som jag beställt online är för mig mycket tilltalande.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**31. Jag kommer att handla från någon annan online matvarubutik under de kommande månaderna.**

1 2 3 4 5

Instämmer inte alls      Instämmer helt

**32. Är det någonting du vill lägga till?**

T.ex. vad du anser vara bra eller dåligt med Coop Onlines varor och tjänster.

## 8.4 Appendix 4: Inter-item Reliability

In order to combine the items into variables, an inter-item analysis with Cronbach's Alpha was conducted. Below, the output of the testing for each concept is presented.

### 8.4.1 Efficiency

**Case Processing Summary**

		N	%
Cases	Valid	854	95,3
	Excluded <sup>a</sup>	42	4,7
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,920	,923	5

**Item Statistics**

	Mean	Std. Deviation	N
@1.ThisitemakesiteeasytofindwhatIneed	3,57	,953	854
@2.Itmakesiteeasytogetanywhereonthesite	3,56	,971	854
@3.Itenablesmetocompleteatransactionquickly	3,60	1,095	854
@4.Thisiteissimpletouse	3,60	,993	854
@5.Thisiteiswellorganized	3,55	,967	854

**Inter-Item Correlation Matrix**

	@1.ThisitemakesiteeasytofindwhatIneed	@2.Itmakesiteeasytogetanywhereonthesite	@3.Itenablesmetocompleteatransactionquickly	@4.Thisiteissimpletouse	@5.Thisiteiswellorganized
@1.ThisitemakesiteeasytofindwhatIneed	1,000	,846	,533	,807	,762
@2.Itmakesiteeasytogetanywhereonthesite	,846	1,000	,571	,837	,763
@3.Itenablesmetocompleteatransactionquickly	,533	,571	1,000	,635	,524
@4.Thisiteissimpletouse	,807	,837	,635	1,000	,793
@5.Thisiteiswellorganized	,762	,763	,524	,793	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@1.ThissitemakesiteeasytofindwhatIneed	14,32	12,333	,838	,762	,894
@2.Itmakesiteeasytogetanywhereonthesite	14,33	12,080	,863	,790	,889
@3.Itenablesmetocompleteatransactionquickly	14,29	12,837	,614	,409	,942
@4.Thissiteissimpletouse	14,29	11,822	,885	,792	,884
@5.Thissiteiswellorganized	14,34	12,450	,801	,678	,901

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
17,89	18,850	4,342	5

**8.4.2 System Availability**

**Case Processing Summary**

		N	%
Cases	Valid	867	96,8
	Excluded <sup>a</sup>	29	3,2
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,815	,816	2

**Item Statistics**

	Mean	Std. Deviation	N
@6.Thissiteisalwaysavailableforbusiness	4,12	,933	867
@7.Thissitelaunchesandrunchesandrunsrighaway	3,98	1,015	867

**Inter-Item Correlation Matrix**

	@6.Thissiteisalwaysavailableforbusiness	@7.Thissitelaunchesandrunchesandrunsrighaway
--	---	--



@6.Thissiteisalwaysavailableforbusiness	1,000	,690
@7.Thissitelaunchesandrunchrightaway	,690	1,000

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@6.Thissiteisalwaysavailableforbusiness	3,98	1,030	,690	,475	.
@7.Thissitelaunchesandrunchrightaway	4,12	,870	,690	,475	.

#### Scale Statistics

Mean	Variance	Std. Deviation	N of Items
8,10	3,204	1,790	2

### 8.3.3 Fulfillment

#### Case Processing Summary

		N	%
Cases	Valid	874	97,5
	Excluded <sup>a</sup>	22	2,5
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,627	,639	3

#### Item Statistics

	Mean	Std. Deviation	N
@8.Itdeliversorderswhenpromised	4,43	,782	874
@9.Itsendsouthetheitemsordered	4,04	,976	874
@10.Thedeliverytimeofferedtomeisc onvenient	4,11	,982	874

**Inter-Item Correlation Matrix**

	@8.Itdeliversorders whenpromised	@9.Itsendsouttheite msordered	@10.Thedeliverytim eofferedtomeisconve nient
@8.Itdeliversorderswhenpromised	1,000	,406	,420
@9.Itsendsouttheitemsordered	,406	1,000	,287
@10.Thedeliverytimeofferedtomeisc onvenient	,420	,287	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Varianc e if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@8.Itdeliversorderswhenpromised	8,15	2,466	,515	,265	,446
@9.Itsendsouttheitemsordered	8,54	2,221	,402	,181	,581
@10.Thedeliverytimeofferedtomeisconvenient	8,47	2,183	,412	,193	,567

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
12,58	4,342	2,084	3

**8.4.4 Privacy**

**Case Processing Summary**

		N	%
Cases	Valid	844	94,2
	Excluded <sup>a</sup>	52	5,8
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,801	,804	2

**Item Statistics**

	Mean	Std. Deviation	N
@11.It does not share my personal information with other sites	4,13	,921	844
@12.This site protects information about my credit card	4,28	,827	844

**Inter-Item Correlation Matrix**

	@11.It does not share my personal information with other sites	@12.This site protects information about my credit card
@11.It does not share my personal information with other sites	1,000	,672
@12.This site protects information about my credit card	,672	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@11.It does not share my personal information with other sites	4,28	,684	,672	,451	.
@12.This site protects information about my credit card	4,13	,849	,672	,451	.

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
8,40	2,556	1,599	2

**8.4.5 Service Quality**

**Case Processing Summary**

		N	%
Cases	Valid	795	88,7
	Excluded <sup>a</sup>	101	11,3
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,942	,942	6

**Item Statistics**

	Mean	Std. Deviation	N
@13.COsemployeesarereliableinprovidingtheservice	4,04	,856	795
@14.COsemployeesarereresponsivetomy servicerequests	4,02	,892	795
@15.COsemployeesarecompetentinprovidingexpected	3,98	,898	795
@16.COsemployeesareaccessibletoanswermyquestions	3,96	,905	795
@17.COhasgoodcredibilityinprovidingtheserviceI need	4,02	,858	795
@18.IcaneasilycommunicatewithXYZCompanyregardingmyservice	3,82	,958	795

**Inter-Item Correlation Matrix**

	@13.COsemployeesarereliableinprovidingtheservice	@14.COsemployeesarereresponsivetomy servicerequests	@15.COsemployeesarecompetentinprovidingexpected	@16.COsemployeesareaccessibletoanswermyquestions	@17.COhasgoodcredibilityinprovidingtheserviceI need	@18.IcaneasilycommunicatewithXYZCompanyregardingmyservice
@13.COsemployeesarereliableinprovidingtheservice	1,000	,746	,805	,665	,729	,654
@14.COsemployeesarereresponsivetomy servicerequests	,746	1,000	,814	,742	,672	,707
@15.COsemployeesarecompetentinprovidingexpected	,805	,814	1,000	,748	,764	,706
@16.COsemployeesareaccessibletoanswermyquestions	,665	,742	,748	1,000	,710	,798
@17.COhasgoodcredibilityinprovidingtheserviceI need	,729	,672	,764	,710	1,000	,700
@18.IcaneasilycommunicatewithXYZCompanyregardingmyservice	,654	,707	,706	,798	,700	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@13.COemployeesarereliableinprovidingtheservice	19,81	16,054	,809	,699	,933
@14.COemployeesarereresponsivetomy servicerequests	19,83	15,667	,832	,724	,930
@15.COemployeesarecompetentinprovidingexpected	19,86	15,387	,873	,789	,925
@16.COemployeesareaccessibletoanswermyquestions	19,88	15,593	,830	,724	,930
@17.COhasgoodcredibilityinprovidingtheserviceI need	19,82	16,072	,804	,666	,933
@18.IcaneasilycommunicatewithXYZCompanyregardingmyservice	20,02	15,394	,802	,688	,934

#### Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23,85	22,340	4,727	6

#### 8.4.6 Product Quality

##### Case Processing Summary

		N	%
Cases	Valid	869	97,0
	Excluded <sup>a</sup>	27	3,0
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

##### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,807	,805	3

##### Item Statistics

	Mean	Std. Deviation	N
@19.COhasanexcellentsortmentofproducts	3,18	1,079	869
@20.COhasasufficientrangeofproductchoices	3,12	1,115	869
@21.TheproductsarethesamequalityasIcangetinthestore	3,84	1,041	869

**Inter-Item Correlation Matrix**

	@19.COhasanexcellen tassortmentofproduct s	@20.COhasasufficient rangeofproductchoice s	@21.Theproductsarethesa mequalityasIcangetinthesto re
@19.COhasanexcellentasso rtmentofproducts	1,000	,823	,466
@20.COhasasufficientrange ofproductchoices	,823	1,000	,450
@21.Theproductsarethesa mequalityasIcangetinthesto re	,466	,450	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@19.COhasanexcellentassortm entofproducts	6,96	3,371	,764	,688	,619
@20.COhasasufficientrangeofpr oductchoices	7,02	3,293	,747	,683	,635
@21.Theproductsarethesameq ualityasIcangetinthestore	6,29	4,385	,479	,231	,903

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
10,14	7,559	2,749	3

## 8.4.7 Perceived Value

**Case Processing Summary**

		N	%
Cases	Valid	853	95,2
	Excluded <sup>a</sup>	43	4,8
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,796	,801	3

**Item Statistics**

	Mean	Std. Deviation	N
@22.Thepricesoftheproductsandservicesavailableatthissite	3,14	1,015	853
@23.Theoverallconvenienceofusingthissite	4,09	,841	853
@24.Theoverallvalueyougetfromthissiteforyourmoneyandeffort	3,59	,911	853

**Inter-Item Correlation Matrix**

	@22.Thepricesoftheproductsandservicesavailableatthissite	@23.Theoverallconvenienceofusingthissite	@24.Theoverallvalueyougetfromthissiteforyourmoneyandeffort
@22.Thepricesoftheproductsandservicesavailableatthissite	1,000	,488	,579
@23.Theoverallconvenienceofusingthissite	,488	1,000	,653
@24.Theoverallvalueyougetfromthissiteforyourmoneyandeffort	,579	,653	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@22.Thepricesoftheproductsandservicesavailableatthissite	7,68	2,539	,589	,357	,789
@23.Theoverallconvenienceofusingthissite	6,73	2,931	,637	,445	,731
@24.Theoverallvalueyougetfromthissiteforyourmoneyandeffect	7,22	2,570	,709	,516	,648

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
10,82	5,474	2,340	3

**8.4.8 Loyalty**

**Case Processing Summary**

		N	%
Cases	Valid	846	94,4
	Excluded <sup>a</sup>	50	5,6
	Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,882	,886	3

**Item Statistics**

	Mean	Std. Deviation	N
@25.Saypositivethingsaboutthissitetootherpeople	3,91	,983	846
@26.Recommendthissitetosomeonewhoseeksyouradvice	3,93	1,009	846
@27.Domorebusinesswiththissiteinthecomingmonths	3,89	1,095	846



**Inter-Item Correlation Matrix**

	@25.Saypositivethingsaboutthissitetotherpeople	@26.Recommendthissitetosomeonewhoseeksyouradvice	@27.Domorebusinesswiththissiteinthecomingmonths
@25.Saypositivethingsaboutthissitetotherpeople	1,000	,913	,605
@26.Recommendthissitetosomeonewhoseeksyouradvice	,913	1,000	,645
@27.Domorebusinesswiththissiteinthecomingmonths	,605	,645	1,000

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
@25.Saypositivethingsaboutthissitetotherpeople	7,82	3,643	,830	,834	,783
@26.Recommendthissitetosomeonewhoseeksyouradvice	7,80	3,467	,861	,847	,752
@27.Domorebusinesswiththissiteinthecomingmonths	7,83	3,796	,640	,418	,954

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
11,73	7,723	2,779	3

**8.4.9 Actual Purchases**

**Case Processing Summary**

	N	%
Valid	807	90,1
Cases Excluded <sup>a</sup>	89	9,9
Total	896	100,0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,458	,458	2

**Item Statistics**

	Mean	Std. Deviation	N
Howmanytimeshaveyouapproximate lyorderedgroceriesfrom	1,93	,725	807
Howmuchapproximatelyhaveyourho useholdspentongroceries	1,51	,757	807

**Inter-Item Correlation Matrix**

	Howmanytimeshave youapproximatelyor deredgroceriesfrom	Howmuchapproxima telyhaveyourhouseh oldspentongroceries
Howmanytimeshaveyouapproximate lyorderedgroceriesfrom	1,000	,297
Howmuchapproximatelyhaveyourho useholdspentongroceries	,297	1,000

**Item-Total Statistics**

	Scale Mean if Item Delete d	Scale Variance if Item Delete d	Correcte d Item- Total Correlati on	Squared Multiple Correlati on	Cronbac h's Alpha if Item Deleted
Howmanytimeshaveyouapproximatelyorderedgrocer iesfrom	1,51	,573	,297	,088	.
Howmuchapproximatelyhaveyourhouseholdspenton groceries	1,93	,525	,297	,088	.

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
3,45	1,424	1,193	2

## 8.5 Appendix 5: Multiple Regression Analysis 1: Enter Method

### Test 1:

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Privacy, Efficiency, Fulfillment, SystemAvailability <sup>b</sup>	.	Enter

a. Dependent Variable: PerceivedValue

b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,586 <sup>a</sup>	,343	,340	,63698

a. Predictors: (Constant), Privacy, Efficiency, Fulfillment, SystemAvailability

b. Dependent Variable: PerceivedValue

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	182,544	4	45,636	112,475	,000 <sup>b</sup>
	Residual	349,346	861	,406		
	Total	531,889	865			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), Privacy, Efficiency, Fulfillment, SystemAvailability

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
	(Constant)	,536	,162					
1	Efficiency	,323	,030	,360	10,737	,000	,677	1,477
	SystemAvailability	,071	,030	,081	2,391	,017	,664	1,506
	Fulfillment	,208	,034	,186	6,152	,000	,838	1,194
	Privacy	,179	,029	,183	6,267	,000	,892	1,121

a. Dependent Variable: PerceivedValue

**Collinearity Diagnostics<sup>a</sup>**

Model	Concept	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	Efficiency	SystemAvailability	Fulfillment	Privacy
	1	4,899	1,000	,00	,00	,00	,00	,00
	2	,043	10,732	,04	,38	,12	,04	,19
1	3	,023	14,481	,01	,45	,38	,14	,37
	4	,022	14,899	,03	,17	,49	,31	,31
	5	,013	19,618	,92	,00	,00	,52	,13

a. Dependent Variable: PerceivedValue

**Test 2:**

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	ProductQuality, ServiceQuality <sup>b</sup>		Enter

a. Dependent Variable: PerceivedValue

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,679 <sup>a</sup>	,461	,459	,57075

a. Predictors: (Constant), ProductQuality, ServiceQuality

b. Dependent Variable: PerceivedValue

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242,222	2	121,111	371,783	,000 <sup>b</sup>
	Residual	283,734	871	,326		
	Total	525,956	873			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), ProductQuality, ServiceQuality

**Coefficients<sup>a</sup>**

Model		Unstandardized		Standardized	t	Sig.	Collinearity	
		Coefficients		Coefficients			Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,935	,105		8,895	,000		
	ServiceQuality	,344	,027	,346	12,606	,000	,820	1,219
	ProductQuality	,386	,023	,455	16,551	,000	,820	1,219

a. Dependent Variable: PerceivedValue

**Collinearity Diagnostics<sup>a</sup>**

Model	Concept	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	ServiceQuality	ProductQuality
1	1	2,943	1,000	,00	,00	,01
	2	,038	8,815	,20	,09	,98
	3	,019	12,541	,80	,90	,02

a. Dependent Variable: PerceivedValue

## 8.6 Appendix 6: Multiple Regression Analysis 2: Stepwise Method

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	ProductQuality		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
2	ServiceQuality		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
3	Efficiency		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
4	Privacy		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
5	SystemAvailability		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
6	Fulfillment		. Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).

a. Dependent Variable: PerceivedValue

**Model Summary<sup>g</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,604 <sup>a</sup>	,365	,364	,62188
2	,680 <sup>b</sup>	,463	,462	,57228
3	,700 <sup>c</sup>	,489	,488	,55837
4	,704 <sup>d</sup>	,495	,493	,55536
5	,707 <sup>e</sup>	,500	,498	,55290
6	,709 <sup>f</sup>	,503	,500	,55171

a. Predictors: (Constant), ProductQuality

b. Predictors: (Constant), ProductQuality, ServiceQuality

c. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency

d. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy

e. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability

f. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability, Fulfillment

g. Dependent Variable: PerceivedValue

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	189,455	1	189,455	489,883	,000 <sup>b</sup>
	Residual	329,499	852	,387		
	Total	518,954	853			
2	Regression	240,247	2	120,123	366,783	,000 <sup>c</sup>
	Residual	278,707	851	,328		
	Total	518,954	853			
3	Regression	253,940	3	84,647	271,495	,000 <sup>d</sup>
	Residual	265,014	850	,312		
	Total	518,954	853			
4	Regression	257,102	4	64,276	208,400	,000 <sup>e</sup>
	Residual	261,852	849	,308		
	Total	518,954	853			
5	Regression	259,720	5	51,944	169,918	,000 <sup>f</sup>
	Residual	259,234	848	,306		
	Total	518,954	853			
6	Regression	261,139	6	43,523	142,987	,000 <sup>g</sup>
	Residual	257,815	847	,304		
	Total	518,954	853			

a. Dependent Variable: PerceivedValue

b. Predictors: (Constant), ProductQuality

c. Predictors: (Constant), ProductQuality, ServiceQuality

d. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency

e. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy

f. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability

g. Predictors: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailability, Fulfillment

Coefficients<sup>a</sup>

Model		Unstandardized		Standardized	t	Sig.	Collinearity	
		Coefficients		Coefficients			Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,868	,081		22,994	,000		
	ProductQuality	,514	,023	,604	22,133	,000	1,000	1,000
2	(Constant)	,933	,106		8,807	,000		
	ProductQuality	,389	,024	,457	16,449	,000	,818	1,222
	ServiceQuality	,343	,028	,346	12,453	,000	,818	1,222
3	(Constant)	,739	,107		6,881	,000		
	ProductQuality	,340	,024	,399	14,030	,000	,742	1,348
	ServiceQuality	,278	,029	,281	9,741	,000	,723	1,383
	Efficiency	,172	,026	,193	6,627	,000	,711	1,407
4	(Constant)	,542	,123		4,392	,000		

5	ProductQuality	,336	,024	,395	13,941	,000	,740	1,351
	ServiceQuality	,241	,031	,243	7,869	,000	,621	1,611
	Efficiency	,171	,026	,192	6,648	,000	,711	1,407
	Privacy	,085	,027	,087	3,202	,001	,796	1,256
	(Constant)	,440	,128		3,448	,001		
	ProductQuality	,339	,024	,399	14,115	,000	,739	1,353
	ServiceQuality	,227	,031	,229	7,355	,000	,606	1,650
	Efficiency	,135	,029	,151	4,714	,000	,574	1,744
	Privacy	,079	,027	,081	2,967	,003	,791	1,264
	SystemAvailability	,076	,026	,087	2,926	,004	,667	1,498
6	(Constant)	,303	,142		2,127	,034		
	ProductQuality	,332	,024	,391	13,751	,000	,727	1,376
	ServiceQuality	,210	,032	,211	6,569	,000	,566	1,767
	Efficiency	,134	,028	,150	4,697	,000	,573	1,744
	Privacy	,075	,027	,077	2,814	,005	,787	1,271
	SystemAvailability	,068	,026	,078	2,613	,009	,655	1,527
	Fulfillment	,067	,031	,060	2,159	,031	,756	1,323

a. Dependent Variable: PerceivedValue

#### Excluded Variables<sup>a</sup>

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics			
					Tolerance	VIF	Minimum Tolerance	
1	Efficiency	,289 <sup>b</sup>	10,041	,000	,325	,804	1,244	,804
	SystemAvailability	,245 <sup>b</sup>	9,063	,000	,297	,935	1,070	,935
	Fulfillment	,199 <sup>b</sup>	7,118	,000	,237	,900	1,112	,900
	Privacy	,202 <sup>b</sup>	7,435	,000	,247	,946	1,057	,946
	ServiceQuality	,346 <sup>b</sup>	12,453	,000	,393	,818	1,222	,818
2	Efficiency	,193 <sup>c</sup>	6,627	,000	,222	,711	1,407	,711
	SystemAvailability	,154 <sup>c</sup>	5,696	,000	,192	,832	1,203	,728
	Fulfillment	,091 <sup>c</sup>	3,214	,001	,110	,780	1,282	,709
	Privacy	,088 <sup>c</sup>	3,154	,002	,108	,796	1,256	,689
3	SystemAvailability	,094 <sup>d</sup>	3,164	,002	,108	,672	1,489	,574
	Fulfillment	,077 <sup>d</sup>	2,767	,006	,095	,775	1,290	,647
	Privacy	,087 <sup>d</sup>	3,202	,001	,109	,796	1,256	,621
4	SystemAvailability	,087 <sup>e</sup>	2,926	,004	,100	,667	1,498	,574
	Fulfillment	,070 <sup>e</sup>	2,528	,012	,086	,770	1,299	,573
5	Fulfillment	,060 <sup>f</sup>	2,159	,031	,074	,756	1,323	,566

a. Dependent Variable: PerceivedValue

b. Predictors in the Model: (Constant), ProductQuality



c. Predictors in the Model: (Constant), ProductQuality, ServiceQuality

d. Predictors in the Model: (Constant), ProductQuality, ServiceQuality, Efficiency

e. Predictors in the Model: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy

f. Predictors in the Model: (Constant), ProductQuality, ServiceQuality, Efficiency, Privacy, SystemAvailabiliy

**Collinearity Diagnostics<sup>a</sup>**

Model	Conc ept	Eigen value	Condit ion Index	Variance Proportions						
				(Const ant)	ProductQu ality	ServiceQu ality	Efficie ncy	Priv acy	SystemAvaila bility	Fulfillm ent
1	1	1,965	1,000	,02	,02					
	2	,035	7,503	,98	,98					
2	1	2,943	1,000	,00	,01	,00				
	2	,038	8,782	,20	,97	,09				
	3	,019	12,466	,79	,02	,91				
3	1	3,913	1,000	,00	,00	,00	,00			
	2	,039	10,057	,12	,97	,05	,05			
	3	,030	11,433	,23	,01	,07	,93			
	4	,019	14,434	,65	,01	,88	,02			
4	1	4,884	1,000	,00	,00	,00	,00	,00		
	2	,046	10,249	,05	,59	,01	,06	,16		
	3	,034	12,030	,00	,39	,00	,79	,06		
	4	,019	16,116	,38	,01	,84	,04	,01		
	5	,016	17,208	,56	,01	,15	,11	,77		
5	1	5,855	1,000	,00	,00	,00	,00	,00	,00	
	2	,048	11,070	,03	,76	,00	,01	,07	,06	
	3	,041	11,916	,03	,05	,01	,29	,18	,19	
	4	,022	16,338	,05	,15	,14	,50	,03	,56	
	5	,018	17,847	,20	,00	,76	,21	,09	,09	
	6	,016	19,103	,70	,03	,08	,00	,64	,10	
6	1	6,834	1,000	,00	,00	,00	,00	,00	,00	,00
	2	,049	11,826	,02	,69	,00	,04	,07	,02	,02
	3	,042	12,708	,01	,12	,01	,28	,09	,23	,02
	4	,023	17,093	,05	,03	,07	,21	,37	,12	,25
	5	,021	18,136	,00	,16	,09	,26	,18	,53	,19
	6	,018	19,282	,17	,00	,70	,21	,08	,09	,00
	7	,012	23,727	,74	,00	,13	,01	,21	,00	,53

a. Dependent Variable: PerceivedValue

## 8.7 Appendix 7: Bivariate Regression Analysis 1: Perceived Value – Loyalty

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	PerceivedValue <sup>b</sup>	.	Enter

a. Dependent Variable: Loyalty

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,681 <sup>a</sup>	,463	,463	,68305

a. Predictors: (Constant), PerceivedValue

b. Dependent Variable: Loyalty

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	358,436	1	358,436	768,252	,000 <sup>b</sup>
	Residual	415,239	890	,467		
	Total	773,675	891			

a. Dependent Variable: Loyalty

b. Predictors: (Constant), PerceivedValue

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
		1	(Constant)	,966				
1	PerceivedValue	,811	,029	,681	27,717	,000	1,000	1,000

a. Dependent Variable: Loyalty

**Collinearity Diagnostics<sup>a</sup>**

Model	Concept	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	PerceivedValue
1	1	1,977	1,000	,01	,01
	2	,023	9,321	,99	,99

a. Dependent Variable: Loyalty

## 8.8 Appendix 8: Bivariate Regression Analysis 2: Loyalty – Actual Purchases

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Loyalty <sup>b</sup>	.	Enter

a. Dependent Variable:

Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

b. All requested variables entered.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Loyalty <sup>b</sup>	.	Enter

a. Dependent Variable:

Howmuchapproximatelyhaveyourhouseholdspentongroceries

b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,237 <sup>a</sup>	,056	,055	,703

a. Predictors: (Constant), Loyalty

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,094 <sup>a</sup>	,009	,008	,753

a. Predictors: (Constant), Loyalty

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,594	1	25,594	51,833	,000 <sup>b</sup>
	Residual	430,572	872	,494		
	Total	456,166	873			

a. Dependent Variable: Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

b. Predictors: (Constant), Loyalty

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,115	1	4,115	7,256	,007 <sup>b</sup>
	Residual	458,261	808	,567		
	Total	462,377	809			

a. Dependent Variable: Howmuchapproximatelyhaveyourhouseholdspentongroceries

b. Predictors: (Constant), Loyalty

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF	
	1	(Constant)	1,210			,102			1,010	1,411
	Loyalty	,184	,025	,237	7,199	,000	,134	,234	1,000	1,000

a. Dependent Variable: Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF	
	1	(Constant)	1,216			,113			,993	1,438
	Loyalty	,076	,028	,094	2,694	,007	,021	,132	1,000	1,000

a. Dependent Variable: Howmuchapproximatelyhaveyourhouseholdspentongroceries

**Collinearity Diagnostics<sup>a</sup>**

Model	Concept	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Loyalty
1	1	1,973	1,000	,01	,01
	2	,027	8,477	,99	,99

a. Dependent Variable: Howmanytimeshaveyouapproximatelyorderedgroceriesfrom

**Collinearity Diagnostics<sup>a</sup>**

Model	Concept	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Loyalty
1	1	1,972	1,000	,01	,01
	2	,028	8,444	,99	,99

a. Dependent Variable: Howmuchapproximatelyhaveyourhouseholdspentongroceries