Self-Service Technologies
- What Influences Customers to Use Them?

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Abstract

Background: The society has changed and become increasingly characterized by technology-facilitated interactions. Companies are starting to make use of self-service technologies (SSTs), instead of interpersonal encounters during service deliveries. Customers’ usage of SSTs has been examined in previous research. However, previous studies have ignored the fact that different types of SSTs have different factors that influence customer's experience and decision to use them, increasing the relevance of examining one specific SST, namely private SST to achieve more accurate results regarding what specific factors that influences customer decision to use this type of SST. The reason for choosing private SSTs is not only because it is the most recent type of SST, it is also the type of SST that develops continuously with the increased use of the Internet and the World Wide Web.

Purpose: The purpose of this research is to identify the most important factors influencing customers to use private SST.

Research Questions: - What value judgement influences customers to use private SSTs the most? - What factors influences customers’ value judgements?

Methodology: This research takes on a quantitative approach with an explanatory research design. The chosen data collection method is performed through one independent survey.

Conclusion: Hedonic and utilitarian value judgements have a positive relationship towards customer's decision to use private SSTs. The utilitarian value judgements have a greater impact on customer's decision to make use of private SSTs, in comparison to the hedonic value judgements. However, hedonic value judgements can still be considered as an important factor in influencing customer's decision to use private SSTs, as the hedonic value judgements still have a relatively strong impact on customer's decision to use private SSTs.

Keywords: Self-Service Technology, Private Self-Service Technology, Perceived Control, Perceived Convenience, Hedonic Value Judgments, Utilitarian Value Judgements, Decision to Use
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1 Introduction

This chapter presents a broad background regarding the development of self-service technologies. The background is followed by a problematization of the subject and the purpose of the study. The chapter ends with a paragraph that describes the structure of the following study.

1.1 Background

Over the past decade, the society has become increasingly characterized by technology-facilitated interactions (Klier et al., 2016; Robertson et al., 2016). This change has affected the relationship between companies and their customers, where an increasing amount of companies make use of technology-based interactions, instead of the traditional way of interpersonal interactions (Collier and Sherell, 2010; Chang et al., 2016; Klier et al., 2016). One of the changes that have arisen in the encounter between companies and their customers is the service delivery. Companies are starting to make use of self-service technologies (SSTs), instead of interpersonal encounters during service deliveries (Collier and Sherell, 2010; Robertson et al., 2016). Self-service technologies enable customers to consume different benefits and services on their own, independent from the involvement of an employee at a company (Chang et al., 2016; Nijssen et al., 2016).

The concept of self-service technology (SST) has existed for a long period of time, where it began with SSTs that were in public areas and the service delivery occurred among other customers, for example automated teller machines (ATMs) and check-in and check-outs at hotels (Klier et al., 2016; Nijssen et al., 2016). The proliferation of these types of SSTs later evolved into for example internet banking and online ticketing, which are SSTs where the customer could get their service delivery in a more private place without the encounter of other customers, for example at home. This type of SSTs are continuously growing and starting to become a common way of service delivery for many consumers (Klier et al., 2016; Robertson et al., 2016).

Many times, SST has become a supplement or even a replacement for the traditional interpersonal service delivery (Wang et al., 2012). The use of SSTs enables companies to standardize their service deliveries and in turn reduce their costs significantly, mainly due to lower labor costs (Curran and Meuter, 2005; Collier and Sherrrell, 2010; Klier et al., 2016). In addition, Scherer et al. (2015) state that SSTs not only enables customers
to get the service they need in a faster manner, but it also provides the service regardless of time and place, making the service delivery more customized. Hence, the use of SSTs is not only a way for companies to reduce their costs, but it is also an alternative for them to increase the value for their customers (Scherer et al., 2015; Chang et al., 2016). However, Klier et al. (2016) state that implementing SSTs can also have negative consequences since it involves a lot of risks. The authors further state that the use of SSTs involves complex technological processes that require higher coordination, which might make the usage of SSTs more difficult than expected for the customers. If the adaption to SSTs does not go as planned, it can instead result in a complicated and problematic experience for the customer, where they decide to not make use of SSTs (Collier and Sherrell, 2010; Chang et al., 2016; Klier et al., 2016).

1.2 Problem Discussion
SSTs has been referred as the answer to the problem on how to increase the availability of a service while still being able to keep low costs (Collier et al., 2014; Klier et al., 2016). With the development of SSTs, many companies have been quick in adapting these technological interactions (Robertson et al., 2016). However, much to their disappointment, many customers have been unwilling to make use of different self-service applications (Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). Companies investments in both time and money for SST implementations are one of the reasons for why it is necessary to understand customers decision of using SSTs before investing in these self-service transactions (Meuter et al., 2005; Eriksson and Nilsson, 2007; Robertson et al., 2016). As a result, studies have been conducted in order to try to understand what factors influence customers when evaluating SSTs and their decision to make use of it (Meuter et al., 2005; Cunningham et al., 2009; Wang et al., 2012). From these studies, it has become evident that SSTs influence customers differently, were some customers value the flexibility and speed of SSTs, while others feel that SSTs slows down the process of transaction and cause anxiety and embarrassment (Collier et al., 2014; Robertson et al., 2016). However, previous research on this manner (Meuter et al., 2000; Curran et al., 2003; Yen, 2005) has caused more confusion than clarity and their results are not generalizable (Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016).

One of the major reasons for the inconsistent results regarding what factors that influence customers to use SSTs, is according to Collier et al. (2014) and Robertson et
al. (2016) due to that previous studies have ignored the fact that different types of SSTs have different factors that influence customer's decision to use them (Meuter et al., 2000; Curran et al., 2003; Yen, 2005). Furthermore, customers experience with SSTs has also been examined without considering the fact that there are different types of SSTs (Meuter et al., 2000; Curran et al., 2003; Yen, 2005). The failure of considering the different types of SSTs is according to Collier et al. (2014) and Robertson et al. (2016) the primary reason for the confusion that exists in the field of SSTs. Past research has treated SSTs as an comprehensive concept, without realizing the variety of the different types of SSTs and that all SSTs are not comparable (Collier et al., 2014; Robertson et al., 2016). Customers are not equally accepting to all the types of SSTs and failing to recognize the differences will result in invalid conclusions (Collier et al., 2014).

Due to mixed opinions among customers regarding factors that influence their decision to make use of SSTs, more research within the field is necessary in order to understand the unique differences between the different types of SSTs (Curran and Meuter, 2005; Cunningham et al., 2009; Dimitriadis and Kyrezis, 2011; Wang et al., 2012; Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). Curran and Meuter (2005) have found that the opinions customers have towards SSTs is strongly dependent of what type of SST it is. Likewise, the study conducted by Cunningham et al. (2009) showed that the amount of contact a customer has with an employee or other customers during a self-service delivery will strongly affect the customer's evaluation of the SSTs. The study carried out by Dimitriadis and Kyrezis (2011) also found that customers’ evaluation of SSTs is influenced by what type of self-service delivery it is. Wang et al. (2012), Collier et al. (2014), Klier et al. (2016), Robertson et al. (2016) corresponds with the above mentioned studies, stating that it is necessary to understand what specific factors influences consumers decision to make use of SSTs, depending on what type of SST it is, since the factors from one type of SST is not generalizable or applicable for all types of SSTs. In order to measure the factors that influences customers decision to make use of SSTs, Collier et al. (2014) proposes that SSTs should be categorized into public self-service technologies, and private self-service technologies. The reason for this categorization is that the evaluation of SSTs that includes interactions with employees or other customers may be different due to external factors caused by for example other customers, in comparison to the evaluation of SSTs where the customer
can consume the services in their own home, without interacting with others (Collier et al., 2014; Robertson et al., 2016).

The evaluation and the value that customers derive from SSTs varies depending on what type of SST it is and their experience of it, and it has been shown that customers overall evaluation of SSTs is positively related to hedonic and utilitarian value judgments (Collier et al., 2014). Hedonic values derived from self-service experiences can be described as the enjoyable and self-fulfilling benefits that are gained from the use of SSTs, while utilitarian values is the functional benefits provided by SSTs (Van der Heijden, 2004; Strombeck and Wakefield, 2008). Therefore, it is worthwhile to understand what value means for customers from both a hedonic and utilitarian point of view, in order to understand what factors influences their decision to use of SSTs (Eriksson and Nilsson, 2007; Robertson et al., 2016). However, understanding consumers behaviour is a hard challenge that many companies faces because of all the different factors that can influence a consumer's behaviour. According to the theory of planned behaviour which is a common concept within this field of research, perceived control is one of the most important factors that influences consumers behaviour (Truong, 2008; Chen and Li, 2010; Collier and Sherrell, 2010). Perceived control is furthermore a major part of SSTs since companies that implement SSTs often expect the customers to use the technology by themselves, which often makes customers feel a lack of control since the technology is leading the service experience instead of the customer (Collier and Sherrell, 2010). The lack of control does not only result in unsatisfied customers, it will also discourage customers to use SSTs in the future (Zhu et al., 2007). Furthermore, when customers are using SSTs they most often do so in order to overcome the location and time constraints from a traditional service delivery (Durkin, 2004; Pujari, 2004). Thus, the perceived convenience of SSTs is another determinant factor that influences consumers’ behavior towards using SSTs (Collier and Sherrell, 2010; Collier et al., 2014).

In order to assess the factors that influences customers decision to make use of SSTs, it is as previously mentioned important to first separate the different types of SSTs, since the factors for why customers use SSTs differs based on what type SST it is (Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). Therefore, this research will focus on one type of SST, namely private SST. Private SSTs is not only the most recent type of SST, it is also the type of SST that develops continuously with the increased use of
the internet and the world wide web (Hilton et al., 2013; Kallweit et al., 2014). By separating the different types of SSTs, it is possible to achieve more accurate results regarding what specific factors that influences customer decision to use private SSTs (Collier et al., 2014). By doing this, previous calls for more research on how specific situations of SSTs will influence consumers decision to make use of self-service technologies will be answered (e.g Dimitriadis and Kyrezis, 2011; Wang et al., 2012; Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016).

1.3 Purpose
The purpose of this research is to identify the most important factors influencing customers to use private SST.

1.4 Research Questions
What value judgement influences customers to use private SSTs the most? What factors influences customers value judgements?

1.5 Delimitation
This research faces a delimitation regarding the use of SST. Previous researches have used SST as a comprehensive concept, without considering the fact that different types of SSTs influences customer differently (Collier et al., 2014; Robertson et al., 2016). In order to identify the specific factors influencing SST, this research is solely focusing on one specific type of SST, namely private SST, which according to Collier et al. (2014) is necessary in order to identify the specific factors influencing customers to use SSTs. Furthermore, this research faces another delimitation regarding the theory of planned behaviour. This research will solely use perceived control and convenience derived from the theory of planned behaviour, since the researchers found these two constructs to be of most relevance for measuring customers’ behaviour. In addition, these two constructs have been used alone in previous researches as well, as for example in Collier and Sherrell (2010) and Robertson et al. (2016).

1.6 Report Structure
This research will continue with a literature review presenting the fields within SSTs, theory of planned behavior, as well as utilitarian and hedonic value judgements. The conceptual framework, where the formed hypotheses are presented and connected to previous research and relevant theories, follows the literature review. The methodology
chapter argues for what the researchers have done and why. This chapter includes the choice of research approach and design, data sources, data collection method, and sample. An operationalization together with the data collection instruments developed is introduced in order to show that the items presented in the survey have been established through previous research. Furthermore, pretest and data analysis method are presented in this chapter. The methodology chapter will end with chapters discussing the quality criteria and ethical considerations of the research. In the chapter after the methodology, chapter five, the data analysis and results from the gathered data are presented, including a presentations of the descriptive statistics, reliability and validity tests, and the hypotheses testing. The analysis chapter is followed by chapter six, where a discussion of the findings is presented and later on followed by chapter seven containing a conclusion, where the main findings from the research is assessed. At last, the final chapter of this research will discuss the managerial and theoretical implications, the limitations of the study, and present suggestions for further research.
2 Literature Review

This chapter presents a review of previous research within the field of self-service technologies in connection to the theory of planned behavior and perceived value judgements.

2.1 Private Self-Service Technology

A private self-service technology (SST) is the type of SST that is located where a customer can use the SST without having to engage with other customers or employees (Klier et al., 2016; Robertson et al., 2016). Examples of these types of self-service technologies are the Internet and interactive phone systems (Wang et al., 2012; Collier et al., 2014). Customers using private self-service technologies have the choice to stop the service they are experiencing in the middle of a transaction while still being able to restart the transaction at a later time (Collier and Sherrell, 2010; Scherer et al., 2015). By using this type of SSTs, customers can control the transaction, both the engagement level and the pace of the transaction (Collier et al., 2014; Scherer et al., 2015). Although private SSTs might not be the quickest and easiest type of transaction, customers using this type of transactions can conveniently browse the system in the pace they want without feeling pressured by other customers (Collier et al., 2014; Robertson et al., 2016). There are many benefits of using private SST, however, some customer still decides to not make use of this type of SST (Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). The authors further explain that there are multiple reasons for why some customers do not use SSTs. As for example, using private SSTs for the first time can be quite complicated, which means that customers needs to learn how to use it by themselves (López-Bonilla and López-Bonilla, 2013; Scherer et al., 2015). Some customers raised their complaints regarding the social dimensions, stating that using private SSTs will not serve them in the way they are served in face-to-face situations (Collier et al., 2014; Scherer et al., 2015). Other customers are afraid of using private SSTs due to the risk of having security issues (López-Bonilla and López-Bonilla, 2013; Scherer et al., 2015). However, the situation of private SSTs is starting to change and improve (Zhu et al., 2007; Klier et al., 2016). The technology improvement for these types of transactions decreased the chances of human errors and time consumption and has made it possible for customers to gain access of information that would be much more expensive to offer individually (López-Bonilla and López-Bonilla, 2013;
Robertson et al., 2016). However, the next challenge within the field of private SSTs is to understand the customers’ behavior and the factors that influence their behavior.

2.2 Theory of Planned Behavior
The theory of planned behavior is an addition of the widely discussed theory of reasoned action (Ajzen and Fishbein, 1980; Ajzen, 1985) and is perceived as being one of the most influential models for explaining the human behavior (Truong, 2008; Chen and Li, 2010; López-Bonilla and López-Bonilla, 2013). This model has been proven to be successful in foreseeing and explaining the human behavior across many different contexts (Truong, 2008; Chen and Li, 2010; López-Bonilla and López-Bonilla, 2013; Collier et al., 2014). The theory of planned behavior is built on existing theories on consumer attitudes and behaviors’ and is suggesting that perceived control, among other constructs, is an important factor for predicting customers’ intentions and behaviors’ (Truong, 2008; Chen and Li, 2010; Collier and Sherrell, 2010). Perceived control can be explained as an individual's ability to engage a behavior of interest (Ajzen, 1985; Chen and Li, 2010). In order to engage in a behavior, individuals need available resources (Zhu et al., 2007; Collier and Sherrell, 2010). These resources can for example be time availability, technology accessibility, and presence or absence of other individuals (Chen and Li, 2010; Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). All these resources are examples of convenience. Perceived control has the ability to influence the customer's’ reason for interacting with technology, while perceived convenience stands for the required resources to gain or enhance the benefits obtained through the technology transaction (Truong, 2008; Chen and Li, 2010; Collier and Sherrell, 2010).

The research will use perceived control and conveniences in order to explore how they influence customers’ reasons for using SSTs. Perceived control and convenience are two factors that influence other variables that together will determine the consumer's decision to use SSTs. These two constructs will be reviewed through existing research, from a self-service perspective.

2.2.1 Perceived Control
The literature regarding technology based services and self-services have identified perceived control as being a vital part of SSTs effectiveness (Zhu et al., 2007; Collier and Sherrell, 2010; Wang, 2012; Zhu et al., 2013; Collier and Barnes, 2015). Perceived
control can be explained as the evaluation of control over a task in an environment (Zhu et al., 2007; Wang, 2012; Collier and Barnes, 2015). Perceived control involve the ability to control the flow of information, the speed of transaction and the level of interaction (Schumann et al., 2012). Moreover, perceived control also refers to the customer’s ability to decide the handling and the outcome of the service experience (Zhu et al., 2013; Collier and Barnes, 2015). With a properly designed self-service technology, customers should have the capability to decide and customize the service offering, instead of using and receiving standardized performances (Collier and Sherrell, 2010). The aspect of perceived control let the customers tailor the service offering on their own which will match their potential needs and desires for the service outcome (Collier and Sherrell, 2010; Wang, 2012).

Numerous earlier studies have incorporated perceived control as a factor of the interactivity between humans and technology (Collier and Sherrell, 2012; Collier and Barnes, 2015; Mai and Olsen, 2016; Schmitz et al., 2016). More specifically, Walker et al. (2002) and Howard and Worboys (2003) both identified perceived control as one of the factors that affects customer's use and nonuse of SSTs. A study conducted by Dabholkar et al. (2003) found that customers perceived control was influencing customers overall decision of using SSTs, and lowered their perceptions regarding risks with STTs (Lee and Allaway, 2002). Zhu et al. (2007) also found that offering qualified information and enhancing the interactivity will affect the customer's feeling of control. Hence, perceived control is undoubtedly an important aspect within SST and customers are in fact concerned with the idea of control when asked to take more responsibility for the process of the transaction.

2.2.2 Perceived Convenience

Another vital part of the effectiveness of SST is according to Collier and Sherrell, 2010; Wang, 2012; Zhu et al., 2013; Collier and Barnes, 2015, the convenience of using SSTs. Previously, convenience have been explained as the time and effort that is required by the customer when they interact with an employee, where Brown (1990) explained a service to be considered as convenient when someone else delivered it for you, and inconvenient when the customer had to deliver the service themselves. However, this way of thinking is not applicable for self-service technology (Collier and Sherrell, 2010). As the convenience within SSTs increases for the customer, they will prefer to deliver the service themselves, instead of having an employee delivering it for them.
(Chen and Li, 2010; Collier et al., 2014). However, if the SST would not be convenient, the customer will not make use of the SST (Collier and Sheller, 2010). Perceived convenience is in the context of SSTs, related to customer's interaction and use of the technology, and also the specific environment that the technology is used within (Chen and Li, 2010; Zhu et al., 2013). Convenience within self-service technology can be explained as the effort required to make use of the SST and also the perceived time it will take to use it (Zhu et al., 2007; Collier et al., 2014).

Numerous earlier researchers have emphasized the importance of perceived convenience (Meuter et al., 2000; Chen and Li, 2010; Zhu et al., 2013; Collier and Barnes, 2015; Klier et al., 2016). Durkin (2004) identified perceived convenience as being the customer's judgement when evaluating SSTs. Pujari (2004) found that customers valued time and information accessibility the most, which are two different measurement types of perceived convenience. Collier and Sherrell (2010) found that the perceptions of perceived convenience were one of the important factors for customers when evaluating SSTs. Similarly, a study conducted by Ding et al. (2011) also found that one of the indicators for customers when evaluating the service quality of SSTs was perceived convenience. Thus, perceived convenience is one of the crucial concepts for customers when evaluating SSTs.

2.3 Hedonic and Utilitarian Values
The value customers have towards private SSTs can also differ based on the experience. Therefore, it is worthwhile to describe what value means for customers, from a hedonic and utilitarian point of view. According to Van der Heijden (2004) the hedonic value judgement would for example be when customers value SSTs because they enjoy the procedure of consuming the service privately in their own house, they derive the value based on the feeling that SSTs provides, rather than the function. The author further explain that utilitarian value judgement on the other hand is derived when consumers for example value SSTs because it provides them with faster service, which in turn gives them more time for other errands. They value it for its useful functions (Van der Heijden, 2004; Strombeck and Wakefield, 2008).

In the context of SSTs, it has been shown that customers overall decision to make use of SSTs is positively related to hedonic value judgments (Collier et al., 2014). Research conducted by Bateson (1985), Dabholkar (1996), and Robertson et al. (2016), have
found that customers will experience a more enjoyable and hedonic experience if the self-service provided is giving them what they expected of the transaction. Moreover, research regarding utilitarian values have shown that customers overall decision to make use of SSTs is positively related to utility considerations (Curran and Meuter, 2007; Eriksson and Nilsson, 2007). Additionally, Collier and Sherrell (2010) also found that the utilitarian values derived from self-service experiences will strongly influence the customer's experience of the SSTs. Understanding the hedonic and utilitarian values derived from customers SSTs experiences will give a clearer picture of what customers want, need, and expect of their experiences with SSTs (Eriksson and Nilsson, 2007; Robertson et al., 2016).
3 Conceptual Framework

This chapter presents argumentations for the research hypotheses constructed in connection to the relevant theories.

The conceptual framework used for this research is presented in Figure 1 below. The conceptual framework is built upon the information from past research on self-service technologies (SSTs) gained from the theoretical framework. As can be seen from Figure 1, the model consists of perceived control and convenience, hedonic and utilitarian value and decision to make use of private SSTs. H1 and H2 measure perceived control’s relationship towards hedonic and utilitarian value judgments, in order to see its influence on customers’ value judgments. The same relationship is measured for H3 and H4, except that it is the relationship with perceived convenience’s that is being measured. The model furthermore measures the relationship between the hedonic and utilitarian value judgments towards customer's decision to use private SSTs through H5 and H6, in order to see which one of them that is of most importance for customers decision to use private SST.

![Figure 1 - Research Model](image)

3.1 Impact of Perceived Control

Perceived control is defined as the customer's ability to command the outcome of encountering with SSTs (Wang et al., 2012; Robertson et al., 2016). Perceived control has for many years been used as a factor when discussing customer's use of SSTs (e.g. Walker et al., 2002; Howard and Worboys, 2003; Collier and Sherrell, 2010; Robertson et al., 2016).
Moreover, previous research has found that customer's feelings regarding the perceived control of the SST experience will have a direct relationship to the hedonic value judgements (Collier and Sherrell, 2010; Robertson et al., 2016). Similarly, Ward and Barnes (2001) found that the perceptions of control are related to the customers feeling regarding the pleasure, arousal and involvement in a self-service transaction setting. When customers feel a sense of control over the self-service transaction, the action of exploring the technology will increase, which in turn will create a more enjoyable experience by uncovering all the benefits that the SST has to offer (Collier et al., 2014; Robertson et al., 2016).

Perceived control has also been found to influence customers’ utilitarian value judgments from a service experience (Collier et al, 2014). From previous research, it can be concluded that in order for customers to use self-service transactions, the service delivery must fulfill the customer's expectation of what they believe should be provided by using the SSTs (Collier and Sherrell, 2010; Wang et al., 2012). According to Wolfinbarger and Gilly (2001), the control customers feel in a self-service transaction will be associated with the ease of finding the suitable information, control the transaction process, and completing the transaction in order to achieve the desired results, which are all factors connected to utilitarian ways of evaluating self-service technologies (SSTs). Thus, customers perceived control will have a great impact on the hedonic and utilitarian values of a private SST experience:

*H1: A customer’s perceived control of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST*

*H2: A customer’s perceived control of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST*

### 3.2 Impact of Perceived Convenience
Perceived convenience in a self-service context is concerned with the interaction between customers and technology as well as the environmental factors that are surrounding SSTs (Collier and Sherrell, 2010). Perceived convenience can further be defined as perceived time and effort considered to be essential for finding and facilitating SSTs (Collier and Kimes, 2013; Robertson et al., 2016). The perceived
convenience in self-service transactions can be categorized by time and location accessibility (Collier et al., 2014; Robertson et al., 2016). Moreover, the perceived convenience that a customer find essential for using SSTs will influence the customers’ hedonic and utilitarian value judgements (Collier et al., 2014).

From earlier research conducted by Childers et al. (2001) and Collier and Kimes (2013), it has been shown that perceived convenience will influence a customer's enjoyment or hedonic value judgements of a transaction. The authors further explain that if customers perceive the self-service transaction through self-service technologies (SSTs) to be convenient, the customers will find an opportunity to engage in the transaction more and find different options and features of the SST. For example, if customers feel that the SST is not easy to use, they will simply try to finish the transaction as soon as possible without any further engagement (Childers et al., 2001; Collier and Kimes, 2013). Collier and Sherrell (2010) and Collier et al. (2014) further found that the SST users’ intention to explore the technology will increase in line with the users’ perception regarding the convenience.

From a utilitarian perspective, previous research has identified perceived convenience as a factor influencing the efficiency and effort needed in order to accomplish a task using SSTs (Meuter et al., 2000; Ding et al., 2011). Additionally, Collier and Kimes (2013) explain that customers using SSTs use it because of the convenience aspect, the customers use fewer resources when facilitating the transaction, which leads to a faster transaction. Farquhar and Rowley (2009) state that the perceived convenience of self-service transactions will influence the functional benefits, which is considered to be utilitarian values, gained by completing a transaction by using SSTs. The convenience aspect of SSTs allows the customers to focus on the perceived quality of the self-service transaction rather than focusing on the environment and other customers (Collier and Kimes, 2013). Hence, customers perceived convenience will have a great impact on the hedonic and utilitarian values of a private SST experience.

*H3: A customer’s perceived convenience of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST*

*H4: A customer’s perceived convenience of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST*
3.3 Impact of Hedonic and Utilitarian Values

In order for the SSTs to be able to exist for a long period of time, customers actually need to make use of them (Eriksson and Nilsson, 2007; Robertson et al., 2016). The authors further explain that searching for customers require high investments, which makes it important to understand the customer's decision to make use of SSTs in order to not lose the customers. Another finding from past research have shown that most companies investing in SSTs have not received good return on their investments (Curran et al., 2003; Meuter et al., 2005). Hence, great investments in terms of both time and money for implementing SSTs is one of the reasons for why it is necessary to understanding customers decision for using SSTs before investing in self-service transactions (Meuter et al., 2005; Eriksson and Nilsson, 2007; Robertson et al., 2016). Both hedonic and utilitarian value judgements have been shown to influence a customer's decision towards using SSTs (Overby and Lee, 2006; Collier et al., 2014). One of the many reasons customers decide to give up on traditional service delivery is due to the enjoyment and the feeling derived from SSTs from being able to consume the service privately at their home (Van der Heijden, 2004; Collier et al., 2014). Another deciding factor for using SSTs are the functional benefits such as the usefulness and effectiveness perceived (Strombeck and Wakefield, 2008; Collier et al., 2014). When customers see clear benefits from SSTs, it influences their decision to make use of SSTs (Collier and Sherrell, 2010). Therefore, the hedonic and utilitarian values derived from a private SST will have a great impact on customer’s decision to use private SST:

**H5:** The hedonic value derived from a private SST will have a greater impact on customer's decision to use an private SST, in comparison to the utilitarian value derived from a private SST

**H6:** The utilitarian value derived from a private SST will have a greater impact on customer's decision to use a private SST, in comparison to the hedonic value derived from a private SST
4 Methodology

This chapter presents the research methodology used in order to conduct the research. This chapter also argues for the choice of appropriate methods and approaches in relation to the purpose of the study. At last, it emphasizes the importance of quality and ethical considerations in research.

4.1 Research Approach and Research Design

The aim of this study is to add knowledge to the relationship between hedonic and utilitarian value judgements and their impact on customer's decision to use private SSTs, and also the relationship between perceived control and convenience towards the hedonic and utilitarian value judgements. The research is furthermore based on existing theories and since this research is using previous research as a theoretical foundation, it was conducted by using a deductive research approach. Deductive researches start off by collecting existing theories and material that are relevant for the subject, and later used for the construction of hypotheses. (Bryman and Bell, 2011). The deductive approach is seen as the starting point as well as the foundation for further research (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011). Within deductive research approaches, quantitative research designs are commonly used, and it was also seen as the most appropriate choice of research design for this study. Quantitative research focuses on numbers and already tested theories by studying the relationship between specific variables (Saunders et al., 2009; Bryman and Bell, 2011), which this research aims to do between previously mentioned constructs. Bryman and Bell (2011) argues that the reason for why deductive studies are appropriate for deductive studies, is due to the fact that these types of studies.

This research will furthermore be categorized as an explanatory research, since it suits the purpose, which is to measure the influence that the chosen independent variables have on the chosen dependent variables. Bryman and Bell (2011) state that explanatory research is frequently used when conducting a quantitative research and questionnaires will be used as a method for collecting data. The objective of this research is to gain valuable information in order generate a better understanding regarding the relationships between the studied variables. A quantitative explanatory research will provide a better understanding regarding the cause- and effect relationship, which will provide information that enables this research to draw precise conclusions (Saunders et al., 2009). In order to provide better understanding regarding the studied variables, it is
important to collect additional knowledge prior to confirming any findings (Malhotra and Birks, 2008; Saunders et al., 2009). This research is supported by collecting secondary data from existing theories by conducting an extensive literature review. The reviewed literature therefore acted as a guideline for this research. The purpose, research question, and the hypotheses formed are results from the reviewed literature and they also support the deductive, quantitative, explanatory research approach of this study.

4.2 Data Sources
The data collection for this research consisted of both primary and secondary data sources. The primary data is collected by the researchers in form of interviews, observations, or surveys, where the collection of data is based on the specific research (Creswell, 2014; Lantz, 2014). The researchers of a study do however not collect secondary data in the same manner. Other researchers in previous studies have already collected secondary data, where the purpose of their studies has been different. Hence, secondary data has only been used for the gathering process of this research. Examples of secondary data sources are scientific articles, books, and conferences (Bryman and Bell, 2011; Creswell, 2014; Ghauri and Grønhaug, 2005).

Secondary data was primarily used in the introduction and theoretical chapter of this research, where the different concepts and theories that have been used were collected and presented, in order to provide the reader with a presentation of the topic. Hence, widespread information related to the topic of this research was conducted, which later enabled the formation of the conceptual framework. In order ensure reliable information, this research have used scientific articles from scientific databases such as Onesearch, Google Scholar, and Business Source Premier. In order to ensure reliability for the literature review in the theoretical chapter, most articles used were peer reviewed.

4.3 Data Collection Method
Since this research will have a quantitative approach, and an explanatory research design, the most suitable method of collecting the data was in form of a survey (Bryman and Bell, 2011), in order to identify the most important factors influencing customers to use private self-service technology (SST). A survey is a set of questions that will help researchers to derive the information they want from their target population (Creswell,
The survey in this research included a short cover letter with a brief purpose statement and definition of concepts that were used in the survey, in order to make the completion of the survey more convenient for the respondents. In the beginning of the survey, the participants had to confirm whether or not they had used private SSTs before. Participants that had not made use of private SSTs before were later disregarded in the following sections, however their personal data was still collected for analytical reasons.

Furthermore, the survey included statements regarding perceived control and convenience, hedonic and utilitarian value judgments and their decision to make use of private SSTs. The statements were then answered through a likert scale, where (1) indicated “Strongly Disagree” and (7) indicated “Strongly Agree”. The survey also included control questions where the respondents had to fill out their gender, age, and whether or not they had used private SSTs before or not. The questionnaire was distributed over Facebook, where the respondents were encouraged to spread the survey further to their friends and family. By conducting the research in this manner, and by spreading it through a platform that reaches out to a large population, the collected data allowed a sufficient amount of responses that were useful for the purpose of this research.

4.4 Sample and Sample Size
When conducting a survey, researchers want to generalize their findings and in order to generalize the findings, researchers need to understand the terms population and sample (Bryman and Bell, 2011). Sampling is explained as the selection of appropriate respondents for the research. The sample is a part of the whole population and the population is all the individuals from where the sample can be selected (Bryman and Bell, 2011). For this research, the population refers to private consumers. These consumers are not limited in terms of origin, nationality, gender, age, educational background, or profession. This means that the research can include any possible consumer. However, the population is limited to those who have used private SSTs before.

Furthermore, this research used non-probability sampling, which means that the sample has not been selected by random selection, which entails that some individuals in the population have a higher chance of being selected than others (Bryman and Bell,
Non-probability sampling was used since the publications of the survey being limited to Facebook and distributions at Linnaeus University. Therefore, an equal chance for all individuals of the population to be chosen could not be given. Moreover, the sample used goes in line with the context of convenience sampling. Convenience sampling is used mainly for the researchers availability and because this approach is commonly used within research (Bryman and Bell, 2011). In order to receive generalisable results that can be used with other samples in future studies, a rule-of-thumb regarding the sample size was used in order to receive the needed amount of respondents for the analysis. VanVoorhis and Morgan. (2007), Pallant (2010), and Tabachnick and Fidell (2012) that have presented the following equation:

\[ N = 50 + 8m \]

The \( N \) stands for the number of respondents (the sample size required), and \( m \) stands for the number of independent variables that is measured in the research. Therefore, the survey used in this research required consisting of the following amount of respondents:

\[ 50 + 8(4) = 82 \]

As can be seen, the desired amount of respondents is a least 82 for this research. The aim for this research was to have at least 100 respondents in order to be able to minimize any possible sampling errors that might occur.

### 4.5 Operationalization and Data Collection Instruments

Bryman and Bell (2011) explain that the operationalization is a data collection instrument used to break down theoretical concepts into measurable terms to be used as a framework for the collection of data that is later analysed. Thus, an operationalization needs clearly defined concepts, which relies on the literature review as a provider of detailed descriptions of concepts (Ghauri and Grønhaug, 2005). The descriptions of the concepts therefore need to provide an accurate foundation for the measurements, since the measurements validity and reliability will be dependent on it (Bryman and Bell, 2011). The operationalization will therefore create a connection between the theoretical chapter and the empirical chapter, through the concepts reviewed that are transformed into measurements, used to ensure the collection of the data (Ghauri and Grønhaug, 2005).
<table>
<thead>
<tr>
<th>Concept</th>
<th>Conceptual definition</th>
<th>Measurement items</th>
<th>Questions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private SST</td>
<td>Private SST is the type of SST that is located where a customer can use the SST without having to engage with other customers or employees (Klier et al., 2016).</td>
<td>Control Question</td>
<td>I have used private SSTs before (Yes/No) Age Gender</td>
<td>Collier and Sherrell et al., 2010; Collier et al., 2014; Robertson et al., 2016</td>
</tr>
<tr>
<td>Theory of Planned Behavior</td>
<td>Planned behavior is a model for explaining the human behavior (e.g. Chen and Li, 2010). The theory suggests that perceived control and perceived convenience as important factors for predicting customers’ intentions and behaviors (e.g. Truong, 2008).</td>
<td>Perceived Control</td>
<td>Q1. I feel that I have complete control when using private SSTs Q2. I feel that I can decide the outcome of the service when using private SSTs Q3. I feel comfortable in using private SSTs</td>
<td>Collier and Sherrell et al., 2010; Collier et al., 2014; Robertson et al., 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived Convenience</td>
<td>Q4. I feel that private SSTs allows me to initiate a transaction at times when it is convenient for me Q5. I feel that private SSTs allows me to get the service in a fast manner Q6. Overall, the process of using private SSTs is convenient for me</td>
<td>Collier and Sherrell et al., 2010; Collier et al., 2014; Robertson et al., 2016</td>
</tr>
<tr>
<td>Hedonic and Utilitarian Values</td>
<td>Hedonic Values</td>
<td>Utilitarian values</td>
<td>Decision to make use of private SST</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td>The hedonic value judgment is when the value is derived based on the feeling that SSTs provides, in comparison to the utilitarian value judgment where the value is derived based on its usefulness (e.g Heijden, 2004). Furthermore, Customers overall decision to make use of SSTs is positively related to hedonic value judgments (Collier et al., 2014).</td>
<td>Q7. I feel that the experience of using private SSTs is enjoyable</td>
<td>Q10. I feel that I accomplish just what I want when using private SSTs</td>
<td>Q13. I see clear benefits of using private SSTs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q8. I feel that private SSTs give me what I expect from the service</td>
<td>Q11. I feel that the use of private SSTs increases my productivity</td>
<td>Q14. I feel that I would use private SSTs for future services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q9. Overall, I have a positive feeling towards using private SSTs</td>
<td>Q12. Overall, I feel that private SSTs are practical to use</td>
<td>Q15. Overall, I like to use private SSTs</td>
<td></td>
</tr>
</tbody>
</table>

The operationalization table presents the aspects of perceived control and convenience, and hedonic and utilitarian values that influence the consumer's decision to use private SSTs. The reviewed aspects from the theoretical framework have been conceptualized as well as operationally defined to establish true measurements. Each factor is linked to previously discussed subcategories and later on to the formulated questions in the questionnaire in order to study the relationship between the mentioned factors and customers’ decision to use private SSTs. The operationalization table gives an overview of the conceptual definition of each variable, the instruments measured in the survey, and the formulated questions and the sources used in order to formulate the questions used.
4.6 Pre-Test
Pre-testing is a process where the survey is tested out on a small sample of the respondents before sending out the actual survey in order to eliminate any potential problems (Malhotra, 2010). The feedback from the pre-test will help researchers to avoid any potential problems before introducing the real research (Bryman and Bell, 2011). The authors further state that a pre-test is especially important process when using a questionnaire since the moderators cannot answer any further questions that might be asked by the respondents (Saunders et al., 2009). Ghauri and Grønhaug (2005) explain that a pre-test is done by letting someone critically review the questionnaire and give feedback and recommendations regarding as for example the level of understanding, difficulty, and sensitivity regarding the questions formed.

The survey in this research was pre-tested by presenting the questionnaire to two experts within the field of marketing at Linnaeus University. One of them is an expert in quantitative research and the other one is a senior lecturer in marketing. From the feedback received, small changes were made in terms of the layout, descriptions, and wording. Once the small changes had been adjusted, the survey was send to the senior lecturer again. Furthermore, the pre-test continued by sending the questionnaire to 10 chosen individuals that all represented the population, these individuals were asked to review the survey in terms of the content, context, and the structure. Lastly, after receiving the comments from the individuals that participated in the pre-test, the questionnaire was revised before the final distribution in order to avoid any form of errors.

4.7 Data Analysis Method
In order to analyze the collected data from the survey of this research, a statistical software programme was used, namely IBM SPSS Statistics. Thereafter, four different types of analysis were used in order to organize the information from the collected data. The first analysis method used was descriptive statistics, which provides a clear picture of the collected data by organizing the information in form of central tendency (mean, mode, and median). Descriptive statistics also presents information regarding the distribution of the collected data by showing the standard deviation (Saunders, 2009). The gender, age, and whether the participants had previously used private self-service
technologies (SSTs) were also categorized. The second analysis method was conducted by performing a reliability test by using Cronbach's alpha in order to estimate the reliability of the survey in terms of the results (Saunders et al., 2009). The suggested value of the Cronbach's alpha should generally lie above .70 in order to be considered as reliable (Pallant, 2010; Venkateswaran et al., 2011). Thirdly, the construct validity of this research was measured by performing a Pearson's correlation analysis in order to measure the relationships between the variables. Field (2009) explain that a Pearson’s correlation value should lie between .30 and .90 in order to indicate a strong relationship between the variables measured. The author further explains that having a value over .90 can indicate that the variables are measuring the same thing.

Lastly, the research hypotheses were also tested, by performing a multiple linear regression analysis in two steps, in order to first test the relationship between the independent variables (perceived control and convenience) and the dependent variables (hedonic and utilitarian). Secondly, the previously dependent variables (hedonic and utilitarian) will be used as independent variables and tested against the dependent variable (decision to use private SSTs). This was done in order to measure what factors influenced customer's decision to use private SSTs (hedonic or utilitarian value judgements), also what factors that in turn influenced the hedonic and utilitarian value judgements (perceived control and convenience). Furthermore, Black (2010) states that in order to make statistically accepted conclusions, the p-value must be within the level of significance. A good significance level in research is to have a p-value of .05, which will indicate a 95 % significance level (Zikmund et al., 2010).

4.8 Quality Criteria
Having a high quality standard is always something researchers strive for when conducting a research (Bryman and Bell, 2011). In order for this research to maintain high quality, validity and reliability test were conducted. According to Bryman and Bell (2011) these two tests are crucial to perform in order to secure the quality of the research. There are several validity tests researchers can perform, however, this research will conduct content, construct, and criterion validity tests. A content validity test is a test that will show whether a survey reflects the concept in question (Saunders et al., 2009). In order to ensure content validity in this research, several pre-tests were performed, which has been described more in detail (see chapter 4.6 Pre-Test). For studies using hypotheses derived from previous theories, construct validity need to be
assured as well (Bryman and Bell, 2011). In order to ensure the construct validity for this research, a Pearson’s correlation analysis was performed. Construct validity was also obtained by using previous studies as a base for the theoretical concepts measured. A criterion validity test is conducted in order to review the ability the questions from the questionnario can predict what they are measuring (Bryman and Bell, 2011). Relating the measurements of a concept with theories found regarding the concept ensured the criterion validity of this research. A correlation analysis will also be implemented in order to test criterion validity. Lastly, in order to assure the reliability of this research, reliability tests were performed by conducting Cronbach’s alpha on an item level. Hence, the correlation between the items of customer's decision to use private self-service technologies (SSTs) and the behavioural factors (perceived control and convenience, hedonic and utilitarian values) were analysed.

4.9 Ethical Considerations
As stated by Bryman and Bell (2011), researches are most often dependent on investigations involving participants from the general public. In order to protect the participants in the research, it is important for researchers to conduct their research in an ethically correct way (Christensen et al., 2011). It is also important that the material used will not release any information that might expose the respondent’s identity (Flick et al., 2008). The results of this research will not be affected by the fact that the respondents are anonymous. Therefore, the researchers ensured not to reveal the respondents identities in any way throughout the research. Another important aspect is to think about the type of questions asked and if these questions are appropriate to ask the respondents (Bryman and Bell, 2011). If the questions are sensitive, the respondents will most likely not to answer the questions (Saunders et al., 2009). For this research, the survey together with the questions were pre-tested in order to ensure that the questions were viewed correctly, in order to not intrude on the respondent's privacy.

Another issue that can occur in research is the lack of informed consent (Bryman and Bell, 2011). Lack of informed consent can be when the respondents are not given the choice whether they want to participate or not in the research and when the identity of the researchers is unknown (Flick et al., 2008; Bryman and Bell, 2011). However, it can be hard for researchers to provide all the information needed in order for the participants to make a decision regarding their participation (Bryman and Bell, 2011). In order to minimize the risks of lack of informed consent, the researchers can give as much
information as possible in order to increase the participants understanding of their participation (Flick et al., 2008). The authors of this research did not force any participant to answer the questionnaire, the participation were completely voluntary. The researchers provided the participants with a text that explained the aim of the research as well as a guarantee of participation anonymity before presenting the questions.
5 Analysis and Results

This chapter presents the empirical material gathered from the survey that was analysed using IBM SPSS Statistics. The gathered results are analysed through Descriptive Statistics, Reliability Tests, Construct Validity, and a two-step multiple regression with the aim to test the hypotheses developed.

5.1 Descriptive Statistics

A total amount of 143 took part in the questionnaire. All the respondents answered ‘Yes’ on the first control question: *I have used private SST before*. Therefore, no respondents were filtered out. The gender distribution of participants is quite evenly distributed, 56.4 % were females and 43.6 % were males. The majority of the respondents were between ages of 18-25 (73.5 %) and 26-30 years old (21.4%), while only 5.1 % of the respondents were over 30 years old.

Table 1 - Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. error</td>
<td>Std. error</td>
</tr>
<tr>
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<td>7</td>
<td>5.90</td>
<td>.912</td>
<td>-.228</td>
<td>.378</td>
</tr>
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<td>.378</td>
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<td>.785</td>
<td>-1.859</td>
<td>.378</td>
</tr>
<tr>
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<td>6.62</td>
<td>.673</td>
<td>-2.080</td>
<td>.378</td>
</tr>
<tr>
<td>Convenience</td>
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<td>7</td>
<td>6.59</td>
<td>.715</td>
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<td>.378</td>
</tr>
<tr>
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<td>1.080</td>
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<td>.378</td>
</tr>
<tr>
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<td>7</td>
<td>5.26</td>
<td>.907</td>
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<td>.378</td>
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<td>5.18</td>
<td>.970</td>
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<td>.378</td>
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<tr>
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<td>7</td>
<td>6.44</td>
<td>.680</td>
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<td>.378</td>
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<td>7</td>
<td>6.62</td>
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<td>-.290</td>
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<tr>
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<td>6.69</td>
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<td>-.443</td>
<td>.378</td>
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<tr>
<td>Decision</td>
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<td>7</td>
<td>6.56</td>
<td>.680</td>
<td>-.829</td>
<td>.378</td>
</tr>
</tbody>
</table>
In Table 1, the descriptive statistics of the independent variables and the dependent variables is presented in a table of frequency. The table presents the data on the sample size (N), the minimum and maximum statistics (1-7) that the respondents have answered for each question, the mean, standard deviation, and the skewness and kurtosis. Regarding the measurements, it can be seen that the mean of every question is above 4, which means that the respondents had a positive outlook of the variables that were suggested and the standard deviation for most of the measurements was below 1, except for question 1 in the measurements regarding hedonic values, which had a standard deviation of 1.080.

5.2 Reliability Test
In order to assess the reliability and the internal consistency of the measurement items, Cronbach's alpha was measured for both the independent and the dependent variables. As mentioned in chapter 4.7 Data Analysis Method the suggested Cronbach's alpha should be above .70 in order to be considered as reliable (Pallant, 2010; Venkateswaran et al., 2011). In Table 2, the Cronbach's alphas for all variables are presented. As can be seen, all variables have a Cronbach's alpha that is above .70, with the exception of the utilitarian values, which had a Cronbach's alpha result of .656. Due to 6 outliers found in the collected data, the Cronbach's alpha was tested once again but without the outliers in order to compare the differences. However, the results did not affect the overall score of the Cronbach's alpha to a large extent. Therefore it was decided to include the outliers in the rest of the following calculations.

Although the Cronbach's alpha of the utilitarian values was not above .70 (see Table 2) as suggested by Pallant (2010) and Venkateswaran et al. (2011), a Cronbach's alpha that is at least above .65 can according to Zikmund et al. (2010), Hair et al. (2011), and Bonnet and Wright (2015) still be considered as reliable. Furthermore, Streiner et al. (2014) argue that if the sample size of a research were to be doubled, the Cronbach's alpha would most likely increase as well. Due to the above mentioned reasons, it was decided to keep the utilitarian values as an approved variable. Hence, the results of the reliability test indicate that the measurement items that have been used for the purpose of this research have measured what they were supposed to measuring (Pallant, 2010).
<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s alpha (α)</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Control</td>
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</tr>
<tr>
<td>Perceived Convenience</td>
<td>.798</td>
<td>3</td>
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<tr>
<td>Hedonic Values</td>
<td>.700</td>
<td>3</td>
</tr>
<tr>
<td>Utilitarian Values</td>
<td>.649</td>
<td>3</td>
</tr>
<tr>
<td>Decision to Use</td>
<td>.844</td>
<td>3</td>
</tr>
</tbody>
</table>

**5.3 Validity Test**

A Pearson’s correlation analysis was performed through SPSS in order to determine the construct validity of the research and to examine to what degree the variables relate and affect each other (Ghauri and Grønhaug, 2005; Bryman and Bell, 2011). In Table 3, the correlation statistics is presented together with the significance level. The numbers in the table reveal that all the relationships between the variables correlate between the acceptable values proposed by Field (2009) who states that the relationships should lie between ±0.3 and ±0.9. The relationship between hedonic and utilitarian (.370*) and hedonic and convenience (.375*) reveal a relatively weak correlation between the variables (see Table 3). However, the correlations between the variables are still within the acceptable range.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Convenience</th>
<th>Hedonic</th>
<th>Utilitarian</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>1</td>
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<tr>
<td>Convenience</td>
<td>.552**</td>
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<td>Utilitarian</td>
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<td>.011</td>
<td>.534**</td>
<td>.000</td>
<td>.370*</td>
</tr>
<tr>
<td>Decision</td>
<td>.502**</td>
<td>.001</td>
<td>.643**</td>
<td>.000</td>
<td>.664**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Moreover, the validity tests reveals that the correlations between the variables presented are not considered too strong since all are below .80, which means that the variables are not measuring the same thing (Field, 2009). The results of the validity tests further shows that decision and convenience (.643**) and decision and hedonic (.664**) have the strongest correlations. Lastly, Table 3 also presents the significance level of each relationship and as the table demonstrates all the relationships were significant on a 0.05 and 0.01 level.

5.4 Regression Analysis and Hypotheses Testing
A regression analysis was conducted by using SPSS in order to test the developed hypotheses H1 to H6 (see Table 5). Model 2-7 in Table 5 represents a simple linear regression that was conducted in order to seek for additional findings, while model 8 to 10 (see Table 4) represents the multiple linear regression analysis. The multiple linear regression analysis was conducted in order to test the results gained from the conducted survey for the developed hypotheses H1 to H6. The multiple regression was conducted in two steps, where the first step included the independent variables perceived control and perceived convenience and their relationship towards the dependent variable hedonic values (see model 8 in Table 4) as well as their relationship towards the other dependent variable, which is utilitarian values (see model 9 in Table 4). In the second step, hedonic and utilitarian values were then measured as independent variables, in order to see their relationship towards the dependent variable, decision to use private SST (see model 10 in Table 4). Table 4 gives an overview of the hypothesis and the models presented in the multiple regression analysis.

<table>
<thead>
<tr>
<th>Table 4- Overview of Multiple Regression Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypotheses</td>
</tr>
<tr>
<td>H1, H3</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Dependent Variables</td>
</tr>
</tbody>
</table>

Table 5 below presents the collected data from the multiple linear regression analysis. The 6 hypotheses constructed have to maintain at a statistical significance level of .05 (i.e p<0.05) in order to be accepted.
Table 5- Model of Multiple Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8 All</th>
<th>Model 9 All</th>
<th>Model 10 All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.680</td>
<td>3.189</td>
<td>3.915</td>
<td>2.736</td>
<td>2.453</td>
<td>3.573</td>
<td>3.241</td>
<td>2.471**</td>
<td>2.516</td>
<td>2.399</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(.201)</td>
<td>(.570)</td>
<td>(.576)</td>
</tr>
<tr>
<td>Control variables</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.035</td>
<td>-.072</td>
<td>-.043</td>
<td>-.028</td>
<td>-.072</td>
<td>-.070</td>
<td>.058</td>
<td>-.058</td>
<td>-.091</td>
<td>-.023</td>
</tr>
<tr>
<td></td>
<td>(.185)</td>
<td>(.075)</td>
<td>(.055)</td>
<td>(.073)</td>
<td>(.064)</td>
<td>(.086)</td>
<td>(.067)</td>
<td>(.083)</td>
<td>(.079)</td>
<td>(.065)</td>
</tr>
<tr>
<td>Gender</td>
<td>-.103</td>
<td>-.185</td>
<td>-.186</td>
<td>-.136</td>
<td>-.162</td>
<td>.111</td>
<td>.087</td>
<td>-.134</td>
<td>-.160</td>
<td>-.098</td>
</tr>
<tr>
<td></td>
<td>(.197)</td>
<td>(.197)</td>
<td>(.174)</td>
<td>(.168)</td>
<td>(.137)</td>
<td>(.159)</td>
<td>(.176)</td>
<td>(.131)</td>
<td>(.143)</td>
<td>(.151)</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1 Perceived Control</td>
<td>.411*</td>
<td>.402*</td>
<td>.375*</td>
<td>.534*</td>
<td>.571*</td>
<td>.664*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>***(.063)</td>
<td>**(.049)</td>
<td>*(.089)</td>
<td>**(.040)</td>
<td>***(.083)</td>
<td>***(.051)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2 Perceived Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.254**</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>(.053)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3 Perceived Convenience</td>
<td></td>
<td>.375*</td>
<td>.194</td>
<td>.449***</td>
<td>.377***</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>*(.089)</td>
<td>(.094)</td>
<td>***(.046)</td>
<td>***(.091)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4 Perceived Convenience</td>
<td></td>
<td>.534*</td>
<td>.571*</td>
<td>.664*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>**(.040)</td>
<td>***(.083)</td>
<td>***(.051)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5 Hedonic Values</td>
<td></td>
<td>.449***</td>
<td>.377***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>**(.046)</td>
<td>***(.091)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6 Utilitarian Values</td>
<td></td>
<td>.664*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>***(.051)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>.013</td>
<td>.315</td>
<td>.382</td>
<td>.221</td>
<td>.454</td>
<td>.397</td>
<td>.473</td>
<td>.200</td>
<td>.480</td>
<td>.599</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>-.002</td>
<td>.262</td>
<td>.310</td>
<td>.154</td>
<td>.407</td>
<td>.330</td>
<td>.416</td>
<td>.156</td>
<td>.419</td>
<td>.551</td>
</tr>
<tr>
<td>Change in R2</td>
<td>.013</td>
<td>.302</td>
<td>.369</td>
<td>.208</td>
<td>.441</td>
<td>.384</td>
<td>.460</td>
<td>.187</td>
<td>.467</td>
<td>.586</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.973</td>
<td>0.722</td>
<td>0.756</td>
<td>0.637</td>
<td>0.507</td>
<td>0.594</td>
<td>0.664</td>
<td>0.71896</td>
<td>0.67844</td>
<td>0.40156</td>
</tr>
<tr>
<td>Degrees of freedom (df) Regression</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.10; **p<0.05; ***p<0.01; ****p<0.001, N=143

S.E. (standard error) is presented within parenthesis for each of the independent variables.

Thus, the hypotheses with values above .05 will be rejected. The significance levels are indicated with stars, depending on what significance value they have (see notes in Table 5). Table 5 further provides information regarding the beta value, which is only to be discussed in the hypothesis testing if the significance level is the same for the independent variables, which then indicates the independent variables impact on the
dependent variable (Nolan and Heinzen, 2008). These statistical values seen in Table 5 will be used for evaluating the hypotheses below.

5.5 Hypotheses Results
Table 6 displays the results for all hypotheses developed for this research which will be further discussed below. Out of the 6 hypotheses constructed, two hypotheses scored a significance level that was above .05, while the other four hypotheses had significance level below .05.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Sig.</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1: A customer’s perceived control of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST</strong></td>
<td>.091</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H2: A customer’s perceived control of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST</strong></td>
<td>.000</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H3: A customer’s perceived convenience of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST</strong></td>
<td>.248</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H4: A customer’s perceived convenience of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST</strong></td>
<td>.003</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H5: The hedonic value derived from a private SST will have a greater impact on customer's decision to use an private SST, in comparison to the utilitarian value derived from a private SST</strong></td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H6: The utilitarian value derived from a private SST will have a greater impact on customer's decision to use a private SST, in comparison to the hedonic value derived from a private SST</strong></td>
<td>.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

The first hypothesis **H1: A customer’s perceived control of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST** is rejected due to the high significance level of .091, which falls above the accepted level of .05 (see Table 6). Although the hypothesis is rejected, the beta value also indicates a relatively weak correlation (.213) (see model 8 in Table 5) compared to other models in Table 5. If the statistics from model 2 in Table 5 were to be considered however, one can see that the beta value of perceived control alone in its relationship towards the hedonic values would be higher (.411) and behold an accepted significance level (see model 2 in Table 5). The Adjusted R-Square also indicates a value of .262, which means that perceived control explains 26.2% of the hedonic value judgements. Hence, if looking at the relationship between perceived control and hedonic value judgements alone, one would see a relatively strong and accepted relationship, however,
with the involvement of other constructs this relationship becomes much weaker and also significantly unaccepted.

The second hypothesis H2: *A customer’s perceived control of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST* is accepted, as the perceived control indicate a greater impact on the utilitarian values of using private SST than the hedonic values, at a .000 significance level (see Table 6).

The third hypothesis H3: *A customer’s perceived convenience of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST* is rejected due to the high significance level of .248, which falls above the accepted level (see Table 6). Similar to H1, this hypothesis also showed a relatively weak beta value, even if it would have had a accepted significance level (.194). If one would once again consider the statistics from the simple linear regression (see model 4 in Table 5), it is shown that the relationship between perceived convenience and the hedonic values is significantly accepted. However, the beta value when measured alone is .375 and the Adjusted R-Square have a value of .154, which displays that perceived convenience is a relatively weak predictor of the hedonic value judgements.

The fourth hypothesis H4: *A customer’s perceived convenience of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST* is accepted, as the perceived convenience indicates a greater impact on the utilitarian values of using private SST in comparison to the hedonic values, at a .003 significance level (see Table 6).

The fifth hypothesis H5: *The hedonic value derived from a private SST will have a greater impact on customer's decision to use an private SST, in comparison to the utilitarian value derived from a private SST* is rejected. Unlike H1 and H3, this hypothesis did not get rejected due to its significance level, which was .000 (see Table 6). The values that were derived from the hypothesis indicate that hedonic values do have a relatively strong impact on consumers decision to make use of private SST. The beta value in the multiple regression analysis was .377 (see model 10 Table 5), and the Adjusted R-Square when measured alone towards the dependent variable indicated a
value of .330, which displays hedonic values as relatively strong predictor of consumers’ decision to make use of private SST. The values derived from model 6 in Table 5 when hedonic values were measured alone towards the dependent variable also showed a strong and significant relationship with beta value of .571. However, this hypothesis was constructed to measure if hedonic values had a greater impact on consumer’s decision to make use of private SST in comparison to the utilitarian values. When looking at the values for utilitarian values impact on consumers’ decision to make use of private SST, it is clear that hedonic values did not have a greater impact in comparison to the utilitarian values, hence H5 is rejected. This will be further explained below.

The sixth hypothesis H6: The utilitarian value derived from a private SST will have a greater impact on customer's decision to use a private SST, in comparison to the hedonic value derived from a private SST is accepted. Similar to H5, the hypothesis also had a significance level of .000 (see Table 6). The beta value in the multiple regression analysis indicated a value of .524 and an Adjusted R-Square of .416, which displays that utilitarian values does have a strong impact and a strong predictor of consumers’ decision to make use of private SST. As mentioned previously, both H5 and H6 have significantly accepted values that indicate a strong impact on the dependent variable. Due to the fact that their significance level was the same (.000), one can compare their beta values in the multiple regression analysis. When comparing the beta values of H5 (B:.377) and H6 (B:.524), it is clear that H6 has a greater impact and is therefore accepted. Furthermore, the significantly accepted values derived from model 6 and 7 in Table 5, when both hedonic and utilitarian values were measured alone towards the dependent variable, also indicates that utilitarian values does have a greater impact on consumers decision to make use of private SST. Hedonic values (H5) derived a beta value of .571 and a Adjusted R-Square of .330, while utilitarian values (H6) derived a beta value of .664 and a Adjusted R-Square of .416 (see table 5 model 6 and 7).
6 Discussion

This chapter presents a discussion regarding the findings of the research in connection to previous research. The focus of this chapter revolves around the acceptance and rejection of the hypotheses.

The concept of private self-service technologies (SSTs) is a type of service delivery that is continuously growing within a variety of industries. The aim of this research was to broaden the understanding regarding customers decisions to use private SSTs. Collier et al. (2014) and Robertson et al. (2016) have explained that customer's decision to use private SSTs is highly related the hedonic and utilitarian values that customers derive from their experience of using private SSTs. In addition, the hedonic and utilitarian value judgements themselves are influenced by customers perceived control and convenience of a private SST (Walker et al., 2002; Eriksson and Nilsson, 2007; Collier and Sherrell, 2010).

This research started by observing the perceived control and convenience and their impact on hedonic and utilitarian value judgements through a multiple linear regression analysis conducted in two steps. From the first step in the regression analysis, the results from hypotheses 1 to 4 revealed that the two hypotheses that were related to hedonic value judgements were rejected, whereas the other two hypotheses related to utilitarian value judgements were accepted. The two hypotheses that measured perceived control and conveniences’ impact on hedonic value judgements were (H1): “A customer’s perceived control of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST” and (H3): “A customer’s perceived convenience of a private SST will have a greater impact on the hedonic value, in comparison to the utilitarian value derived from a private SST”.

These hypotheses were constructed as researchers e.g Eriksson and Nilsson (2007), Collier and Kimes (2013), Wang et al., (2012), and Robertsson et al., (2016) found that customers perceived control and convenience of an SST experience will have a positive relationship to a customer's hedonic value judgements. However, the results from this research revealed that perceived control and convenience did not have a significantly accepted impact on the customers hedonic value judgements derived from the using private SSTs, which contradicts previous research.
Even though past research has stressed the importance regarding the relationship between customers perceived control and convenience and their hedonic values (Meuter et al., 2000; Collier and Sherrell, 2010; Ding et al., 2011), these researches have used different types of SSTs, public and private or online and offline etc. without considering the fact that the experience of different types of SSTs will be affected by different factors (Klier et al., 2016; Robertson et al., 2016). Based on the findings of this research, it can be assumed that the impact that perceived control and convenience have on the hedonic value judgements, have been seen in studies where different types of SSTs have been used, and not only what this research define as private SST. Additionally, a study conducted by Childers et al. (2001) found that although perceived control play an important role for the customers hedonic value judgements when using online SSTs, which per our definition is private SSTs, perceived control plays a far more important role for the instrumental factors, also referred to as the utilitarian values. Childers et al. (2001) further found that when customers think of private SSTs, they think of it as a technological service delivery with cold information systems with the aim to make the service delivery as convenient as possible. This makes the customers feel a sense functionality and usefulness, seen as utilitarian values, rather than an enjoyable experience, seen as hedonic values, which is more related to physical service delivery environments, also referred to as public SSTs (Childers et al., 2001).

The other two hypotheses that measured perceived control and conveniences’ impact on utilitarian value judgements were: (H2): “A customer’s perceived control of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST” and (H4): “A customer’s perceived convenience of a private SST will have a greater impact on the utilitarian value, in comparison to the hedonic value derived from a private SST”. The outcome of these two hypotheses is showing that perceived control and convenience had the greatest impact on the utilitarian value judgements when compared to the hedonic value judgements, where both had accepted significance level (see table 6), hence the two hypotheses were accepted. This also confirms findings from previous research where it has been found that perceived control and convenience have a strong impact on the utilitarian value judgements that customers derive from the use of private SSTs (e.g Farquhar and Rowley, 2009; Wang et al., 2012; Collier and Kimes, 2013). Even though the impact of perceived control and convenience towards the utilitarian value judgements may not be
compared due to the their significance level not being the same, the results of this research indicates that perceived convenience has a stronger impact towards the utilitarian value judgements, when compared to perceived control. The beta values of perceived convenience were higher on both the simple and multiple linear regression analysis that was conducted (see model 3,5,8, and 9 in Table 5). Additionally, the Adjusted R-Square from when the two factors were measured separately was also higher for perceived convenience when compared to perceived control (see model 3 and 5 in Table 5). Hence, it can be assumed that perceived convenience has a greater impact on the utilitarian value judgements, although this research does not have the evidence for it.

The second step of the multiple regression analysis measured whether the hedonic or the utilitarian values derived from private SST had the greatest impact on customer's decision to use private SSTs (H₅,H₆). As can be seen in Table 6, both hypothesis had significantly accepted values of .000 for hedonic and .000 for utilitarian values. This indicates that both hedonic and utilitarian value judgements does have a significantly accepted impact on consumers decision to make use of private SST, which support previous findings of e.g (Meuter et al., 2005; Strombeck and Wakefield, 2008; Eriksson and Nilsson, 2007) where this relationship has been found as well. Since the significance levels are the same for both constructs, the beta values can be compared, the beta value is .377 for H₅ and .524 for H₆ (see Table 5 model 10), which clearly shows that the utilitarian values have the greatest impact on customer's decision to use private SSTs. In addition, the beta and the Adjusted R-Square was higher for the utilitarian values when they were measured alone towards the consumer's decision to use private SSTs as well. Therefore, (H₆): “The utilitarian value derived from a private SST will have a greater impact on customer's decision to use a private SST, in comparison to the hedonic value derived from a private SST” was accepted and (H₅): “The hedonic value derived from a private SST will have a greater impact on customer's decision to use an private SST, in comparison to the utilitarian value derived from a private SST” was rejected. This is in accordance with the findings of Wolfinbarger and Gilly (2001) who have explained that in order for customers to use private SSTs, the self-service transaction needs to be associated with the ease of finding suitable information, control the transaction process, and completing the transaction with desired results. It has also been argued that customers choosing to use private SSTs do it
because of the convenience aspect, the customers use less resources when facilitating the transaction, resulting in faster transaction, which are related to utilitarian value judgements (Collier and Kimes, 2013). Wolfinbarger and Gilly (2001) further revealed that consumers who seek utilitarian benefits from their use of online SST might be less likely to engage in other activities such as exploration and fail to see the entertaining value from an SST interaction. Hence, the outcome of the utilitarian hypothesis (H6) may explain the rejection of the hedonic hypothesis (H5).

Childers et al. (2001) add to this by stating that many customers feel that private SSTs are designed to generate efficient experiences rather than providing an enjoyable experience. This statement is further supported by Wolfinbarger and Gilly (2001) where it was found through an online survey that approximately 71% of the online shoppers from their research claimed that their last purchase made online was previously planned, fast, and easy to accomplish, whereas 29% of the respondents stated that they were exploring and browsing through the Internet when they made their purchase. This is also in accordance with the results of this research, where utilitarian values have shown to be of greater importance for customers’ decision to use private SST, in comparison to the hedonic values.
7 Conclusion

This chapter presents the main findings from the analysis and discussion concluded in order to answer the purpose of this research.

The purpose of this paper was to identify the most important factors influencing customers to use private self-service technology (SST) by measuring the hedonic and utilitarian value judgements impact on customer’s decision to use private SSTs, and also measuring the impact of customers perceived control and convenience from private SST experiences towards the hedonic and utilitarian value judgements.

The results derived from this research, firstly, supports the assumption that hedonic and utilitarian value judgements have a positive relationship towards customer's decision to use private SSTs. As an answer to what the most important factor that influences customers decision to use private SST is, this research have empirical evidence that supports the assumption that the utilitarian value judgements have a greater impact on customer's decision to make use of private SSTs, in comparison to the hedonic value judgements. However, hedonic value judgements can still be considered as an important factor in influencing customer's decision to use private SSTs as the empirical evidence from this research suggest that the hedonic value judgements have a relatively strong impact on customer's decision to use private SSTs, which corresponds with previous research regarding the subject of SSTs. Secondly, there is evidence that supports the assumption that perceived control and convenience has a positive relationship towards customers utilitarian value judgments derived from the experience of using private SSTs. Hence, factors related to perceived control and convenience, such as time, location, usefulness functionality etc. are the most important factors influencing customers’ utilitarian value judgements, which in turn have the strongest impact on customers’ decision to use private SSTs.
8 Implications, Limitations, and Further Research

This chapter presents the main contributions of this research and suggestions for further research within this field. The limitations faced within the research are also discussed in the following chapter.

8.1 Managerial and Theoretical Implications
The managerial implications of this research has lead to contributions that firms can take into consideration when aiming at successfully implementing private self-service technologies (SSTs) and enhance customers to use the SST. When customers are using the self-service transaction, companies great investments on SSTs will be worth it. The results from this research reveal that the utilitarian values that are derived from the experience of using private SST, is a strong influencing factor in determining the customer's future decision to use private SST. Therefore, it is important for firms that implement private SST to take factors that affects the utilitarian value judgements, such as time, location, usefulness functionality etc. into consideration when implementing private SST. Implementing private SSTs that provide the customers with these types of utilitarian values will result in customers using the private SSTs, hence, resulting in a successful implementation of the private SST. Although the hedonic value judgements derived from the experience of private SSTs did have less of an impact on customers usage of private SSTs in comparison to the utilitarian value judgements, the hedonic value judgements did still have a relatively high impact as well. Hence, factors that affect the hedonic value judgements derived from the experience of using private SSTs should also be considered by firms implementing private SSTs.

The rapid growth and the attractiveness of private SSTs has awaken an interest from scholars to address the existing research gaps within this subject. Several researchers have stressed the importance for academic contributions regarding what factors will influence customers decisions to use private SSTs (e.g Dimitriadis and Kyrezis, 2011 Wang et al., 2012; Collier et al., 2014; Klier et al., 2016; Robertson et al., 2016). Hence, this research has addressed the mentioned research gap and contributed to the field of private SSTs. This research identified two factors that have a direct impact on customers’ decision to use private SST (hedonic and utilitarian values judgements), and also two factors that in turn have an impact on the value judgements (perceived control and convenience). These have all been used in previous research, however, they have
been used in different contexts and industries, and also for SSTs in general Yen (2005); Wang et al. (2012); Robertson et al. (2016). All of these studies have called for further contributions to their findings. Thus, these identified factors will act as a foundation for a theoretical model in further studies of private SSTs when testing these measurements. Hence, the theoretical implications of this research have contributed to existing literature in several ways. The previous research found provided a variety of different conceptualizations and measurements. However, these researches usually took a stand towards combining several different types of SSTs towards a specific product or industry. One of the aspects of this research was to approach the concept of private SST only, from a perspective that is broad and abstract, which allowed the authors to observe the factors that affected consumers decisions to use private SSTs while not being bound to a specific product or industry. As a result, the presented operationalization with the measurements items in this research can further be used by other researchers wishing to approach and elaborate on the concept of consumer's decision to use private SSTs together with the factors derived from previous theories in an objective and neutral manner.

8.2 Limitations
This research faced limitations that may have affected the final outcome. Considering the fact that it was thoroughly difficult to attract a broad population of participants, the primary data used for this research had to be collected through convenience sampling. This lead to limitations regarding the generalizability of the gathered results from the research. In order to gain results that are even more reliable, this research could have been delimited to a specific subgroup of the population, which would allowed a probability sampling technique to be used were valid response rates could be calculated. Although the sampling technique was not something that affected the results derived from this research, since control questions and a sample size was used as methods for collecting the data to ensure that the responses came from the targeted population. However, the sample size is a factor that is still regarded as a limitation, as this research faced some difficulties in gathering answers. Even though the sample met and exceeded the proposed equation by e.g Tabachnick and Fidell (2012), a larger sample size would generate even more reliable results.

Furthermore, even though the aim was to gain a diverse population of participants in terms of a clearer distribution of the age spans in order to increase the
representativeness of all age groups, the final sample gained was dominated by young (18-25 year old) customers, which resulted in a lack of participant engagement of the research that could have an impact on the results. Thus, it is an aspect that further research should seek to address. Also, focusing on a specific type of industry, as for example food, clothing, or electronics, would be highly beneficial as customers’ experiences of private SSTs may differ across different industries. By expanding this research into other contexts, more validity would be further added to the results found in this research.

8.3 Further Research
SST is an interesting field of research as it provides a vast amount of research opportunities due to the fact that SSTs are still developing as a concept, at the same time as the research area is relatively undefined. This research have empirical evidence showing that utilitarian value judgements have a greater impact on customer's decision to use private SST, in comparison to the hedonic value judgements. However, future research could further focus on the factors that influence customer's decision to use private SST by including other factors in order to see if the utilitarian value judgements would still have the strongest impact in comparison to other potential and relevant factors. The hedonic value judgements may not have shown an equally strong impact as the utilitarian value judgements towards customer decision to use private SST, however, it did show a relatively strong impact as well. It would therefore be interesting to test the impact of the hedonic value judgements on different types of private SSTs in different industries, in order to see if the results of this research is consistent for all types of private SST, regardless of what industry it is.

Furthermore, when comparing the impact that perceived convenience and control has towards the utilitarian value judgements, this research indicates that perceived convenience have the greatest impact. However, since the empirical material of this research cannot offer an statistically accepted comparison of these to constructs and their impact towards the utilitarian value judgements, there is no direct evidence for perceived convenience having a greater impact on the utilitarian value judgements. Therefore, in order to develop a more in-depth understanding of what factors that are influencing customer's decision to use private SSTs, future research could base their research on whether perceived control or convenience has the greatest impact on the utilitarian value judgements that are derived from customers experiences of private
SSTs. Also, more research has to be done regarding what factors that have the greatest impact on perceived control and convenience themselves. If future research succeeds with this, it will become evident what exact factors that should be improved for private SSTs, in order to increase customers to use them.
Reference List


Appendices
Appendix A Survey

Hi,

We are two master's students attending the last semester of the Marketing Master at Linnaeus University.

We are currently writing our master thesis regarding consumers decisions to use self-service technology (SST). More specifically, private self-service technology, which is services that a customer can get delivered at home without having to engage with other customers or employees. Booking tickets online (Expedia) or using Internet banking (BankID) are two examples of private SSTs, where the customer get the service delivered on their own.

The answers will be completely anonymous and solely used for the purpose of strengthening our study. This survey will consist of different statements where you will choose the option that matches your opinion the best. The scale will go from 1-7, where one (1) is strongly disagree and seven (7) is strongly agree.

Kind regards,
Bawan and Elma

Age (18-25, 26-30, 30+)

Gender (Male, Female)

I have used private SSTs before (Yes/No)

1. I feel that I have complete control when using private SSTs.
   Strongly disagree 1 2 3 4 5 6 7 Strongly agree

2. I feel that I can decide the outcome of the service when using private SSTs.
   Strongly disagree 1 2 3 4 5 6 7 Strongly agree

3. I feel comfortable in using private SSTs.
   Strongly disagree 1 2 3 4 5 6 7 Strongly agree

4. I feel that private SSTs allow me to initiate a transaction at times when it is convenient for me.
   Strongly disagree 1 2 3 4 5 6 7 Strongly agree

5. I feel that private SSTs allow me to get the service in a fast manner.
   Strongly disagree 1 2 3 4 5 6 7 Strongly agree
6. Overall, the process of using private SSTs is convenient for me.
   Strongly disagree  1 2 3 4 5 6 7  Strongly agree

7. I feel that the experience of using private SSTs is enjoyable.
   Strongly disagree  1 2 3 4 5 6 7  Strongly agree

8. I feel that private SSTs give me what I expect from the service.
   Strongly disagree  1 2 3 4 5 6 7  Strongly agree

9. Overall, I have a positive feeling towards using private SSTs.
   Strongly disagree  1 2 3 4 5 6 7  Strongly agree

10. I feel that I accomplish just what I want when using private SSTs.
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree

11. I feel that the use of private SSTs increases my productivity.
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree

12. Overall, I feel that private SSTs are practical to use.
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree

13. I see clear benefits of using private SSTs
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree

14. I feel that I would use private SSTs for future services
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree

15. Overall, I like to use private SSTs
    Strongly disagree  1 2 3 4 5 6 7  Strongly agree