How taxing is it to use online services? Evidence from the use of Different Available Online Services from Users' Perspective

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Abstract

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The growth of digitalization in today's world is not only a trend anymore, rather it is a necessity for the people. With the advancement of digitalization and internet, the use of various types of online services has become very popular in our day to day professional and personal lives. The aim of this thesis was to find out whether some online services are more effortful to use compared to the others and what factors can influence the use of the online services in different degrees. For this analysis, twelve online services were selected where six services were pleasure-oriented (hedonic) in nature and the remaining six were productivity-oriented (utilitarian) in nature. A survey questionnaire was developed with the help of existing and relevant literatures. Seventy respondents who had the knowledge of using different online services filled up the questionnaire. The measures included procrastination, self-control, perceived ease of use, perceived enjoyment, perceived usefulness and cognitive effort, which were assumed to be critical factors that can influence the consumption pattern of the information technology (IT) use. The result of the thesis proposes that utilitarian online services are cognitively more effortful in nature compared to the hedonic online services. The analysis also suggested that procrastination and self-control are negatively correlated in nature. This is an important measure because when people use an online service, their cognitive resources depleted over time with the cognitively demanding tasks. Thus, if self-control decreases, people are more prone to procrastinate about using the online services. Perceived ease of use was found to be a more correlated with perceived enjoyment rather than perceived usefulness. It was also concluded that utilitarian and hedonic online services cannot be put entirely in opposite poles rather one can be complementary for the other. The scale developed in this thesis is found to be highly reliable.

Keywords: Utilitarian Online Services, Hedonic Online Services, Effort, Procrastination, Self-Control, Perceived Usefulness, Perceived Enjoyment, Perceived Ease of Use etc.

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CHAPTER 1

1.0 Introduction

1.1 Background of the Study

The use of online services has been increasing sharply over the last decade. The ubiquitous influence of different online services can be seen in every sphere of our daily lives starting from reading online news in the morning and ending with social networking or using other online entertainment services like live streamed movies or sports or playing online games. According to a report of Wearesocial, Mcdonald (2018) depicted that from the total 7.593 billion population of world, 4.021 billion people are now internet users which means 53% of the world population are now online. He also highlighted the fact that on an average currently an internet user spends approximately 6 hours every day for using the internet connected devices and online services which is almost one-third of the total time they remain awake every day. Thus, it is becoming more and more important for the researchers and information technology (IT) professionals to study various aspects of IT use.

It has become increasingly important to analyze how the behavioral environment of the user influences the information technology use. It is important to understand the psychological background of the user before understanding the nature of their technology consumption. Many researchers have already been done on the nature of utilitarian information technology use and hedonic information technology use. This thesis is aimed at understanding the phenomenon by finding out what makes the difference in the nature of consumption between these two types of IT use.

1.2 Research Problem

In recent researches in social psychology and consumer behavior, it has been found that utilitarian IT use tends to decrease throughout the day and also throughout the week but in case of hedonic IT use it is not the case (Öörni et al, 2017). The authors concluded that this happens due to depletion of self-control which is limited in nature. Thus, this thesis aims to understand whether utilitarian IT use is effortful and hedonic IT use is effortless which make people lose their self-control in case of utilitarian IT use and not for the hedonic IT use.

The main aim of this thesis is to answer the question "Is utilitarian IT use more taxing compared to the hedonic IT use?"

This topic is quite relevant with "Information Systems" because it links the behavioral aspect of users that makes the difference in their IT use, which can be helpful while designing the IT services for the users.

1.3 Research Gap

Several researches have been done separately in each area of consumer behavior, psychology and information technology on utilitarian and hedonic usage, procrastination, self-control, effort measurements, consumers' attitudes etc. Some of the researches also tried to link different theories of psychology, consumer behavior and information technology, to get a deeper understanding of the user attitude towards information technology usage.

Glenda and Karee (2010) conducted a study to find out how motivation and effort regulation of the graduate students attending in online programs can affect academic procrastination. Tuckman (2002b) also carried out a similar study but with undergraduate students and concluded that students who procrastinate use "rationalization rather than self-regulation" and that is why they earn lower course grades.

Steel (2010) conducted a study among 4000 respondents and proposed a new scale called Pure Procrastination Scale (PPS) and Irrational Procrastination Scale (IPS), to measure different types of procrastination. Svartdal et. al. (2016) used the two scales proposed by Steel (2010) and conducted a study on students and employees from Finland, Germany, Italy, Norway, Poland, and Sweden and concluded that both scales are very useful in measuring procrastination. Musolino (2007) conducted a study with undergraduate students to find out the effect of procrastination and stress on high-effort and low-effort tasks and concluded that participants who are experimented with high-effort and high-stress condition procrastinated more compared to the other situations.

Crowley et. al. (1992) conducted a study to measure the utilitarian and hedonic dimensions of consumer attitudes towards twenty-four product categories. Van Der Heijden (2004) conducted a survey to find out whether hedonic features or utilitarian features of an information system are more important for the user to accept an information system. Wu and Lu (2013) analyzed the influences of extrinsic and intrinsic motivators on utilitarian, hedonic, and dual-purposed contexts of an information system use by

applying the motivation theory. Öörni et. al. (2017) suggested the possible explanation for the difference in hedonic and utilitarian IT use. They emphasized that it is self-control that can explain the differences in utilitarian and hedonic IT use.

Tangney et al. (2004) proposed a new scale that proves that higher self-control is positively related with better performance, better adjustment, lesser psychological problems like eating disorders and emotional problems, better relationship management skill and better ability to cope up with their emotions.

Igbaria et al. (1995) conducted a study to find out what exactly motivates a person's choice of technology use. The authors concluded that perceived usefulness (extrinsic motivation) and perceived enjoyment (intrinsic motivation) both are positively influenced by the perceived ease of use.

Hsu et al. (2018) conducted an experiment with 401 participants and concluded that with more and more cognitively demanding tasks, there is a decrease in work effort and increase in discomfort. Ein-Gar and Steinhart (2017) conducted a study on how the timing of the tasks and self-control level can influence people to engage in effortful tasks. The authors also highlighted that if a task contains both effortful aspects and enjoyable aspects and the enjoyable aspects are being highlighted then effortful aspects are eliminated.

A number of researches has already been carried on different aspects of procrastination, self-control, effort, hedonic and utilitarian aspects of information technology. However, no direct study has been done to understand whether utilitarian IT use is effortful and hedonic IT use is effortless which makes users to lose their self-control in case of utilitarian IT use and not for the hedonic IT use. Thus, the consumption patterns for these two types of IT use are different. This thesis will try to look into that gap by analyzing whether utilitarian online services are more taxing in nature compared to the hedonic online services from users' perspectives.

1.4 Objectives of the Study

The main objective of this study to measure the level of effort a person needs to use the online services. The study wants to identify whether it is possible to categorize the use of some services (utilitarian online services) as effortful and some services (hedonic online services) as effortless.

The core objectives are as follows:

- To understand and identify the factors that makes the difference in the consumption pattern of different online services.
- To understand whether utilitarian online services are more effortful compared to the hedonic online services.

1.5 Research Questions

To fulfill the objectives of the study, two research questions are formulated which will help in the analysis of the study results.

Research Question 1: What factors can influence users' attitudes while using the online services?

User acceptance is very crucial for the success of an information system. That is why, it is very important to understand what factors can influence a user to accept or reject a technology. According to Sun and Zhang (2006), important factors such as perceived usefulness, perceived ease of use, perceived enjoyment, social influence and facilitating conditions have robust impact on users' technology acceptance and use. Self-control and procrastination can also influence the behavioral intention of a user to use a particular technology.

Research Question 2: To what extent some services can be categorized into effortful and some services as effortless?

From the general utility theory of Economics, it is known that people try to maximize benefits and minimize costs to get the maximum satisfaction. Thus, it can be argued that people try to avoid cognitively demanding tasks and are more prone to do tasks that are enjoyable in nature. From that standpoint, it can be studied whether utilitarian online services are cognitively effortful and hedonic online services are less effortful to the users.

CHAPTER 2

2.0 Literature Review

This chapter aims to focus on all the relevant studies that have been already carried out and tries to highlight the important theories which will be helpful in the analysis part of the study.

2.1 Utilitarian and Hedonic Nature of the Products or Services

According to Van der Heijden (2004), utilitarian information systems are productivity oriented and hedonic information systems are pleasure-oriented in nature. Utilitarian information systems intend to deliver instrumental value to users to improve individual, group and organizational productivity; and on the other hand, hedonic information services intend to deliver self-fulfilling values to users by providing pleasure and fun and also encourage users for a continual use. (Sun and Zhang, 2006; van der Heijden, 2004).

According to Sun and Zhang (2006), utilitarian or hedonic dimension is task-dependent and there might not always be clear distinction between these two types of systems. The authors depicted an example of Internet which can be used for both purposes e.g. for job searching and also for entertainment purposes. Thus, a system may have both utilitarian and hedonic features but at different degrees depending on the tasks for which they are used for. Hedonic and utilitarian systems are not always at the opposite poles rather many computer technologies can be used for both work and fun (Starbuck & Webster, 1991). Chesney (2006) depicted some examples. He said that some software can have both productive value and also can be used for pleasure such as “drawing packages, song writing software, video editing software, even word processors”. Thus, the author supported to develop a two-dimensional scale to capture the actual picture.

According to Chesney (2006), in a two-dimensional scale “a system can be placed in different quadrants by different people”. They provided a very good example that a photo editing software can be categorized as purely utilitarian by photography students, dual by an amateur photographer, purely hedonic by a person who is using it for editing own or family photos to upload in social media and completely useless by a person who just takes photos but don’t use any software to edit the photos.

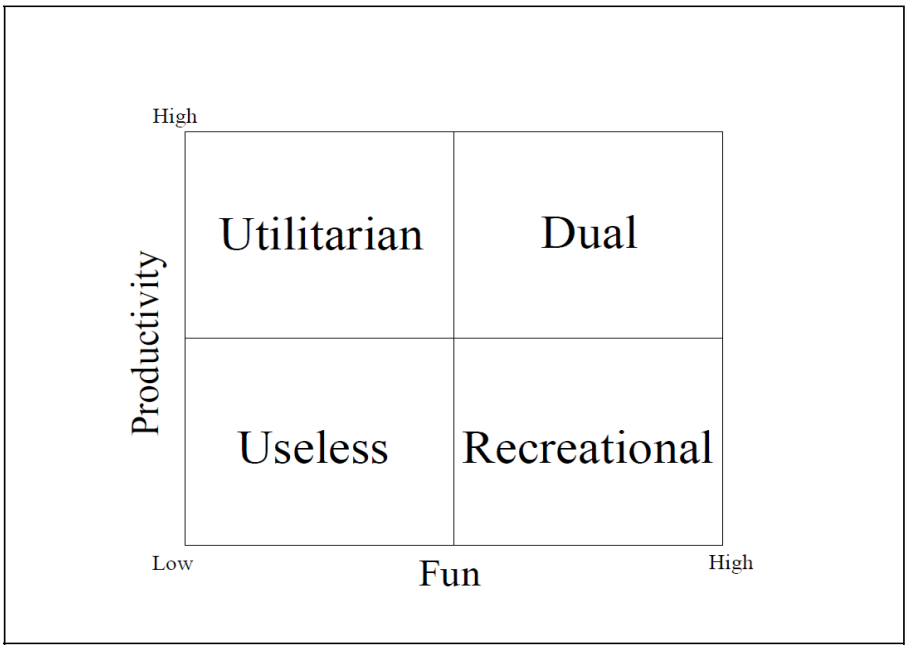

Figure 1. Two-dimensional scale developed by Chesney (2006)

2.2 Procrastination

According to Steel (2010), procrastination is becoming an important topic of discussion in different fields, from Finance when people put themselves in money troubles because of their intentional delay to health when they delay going to doctors. For example, it is quite common to see some people paying interests because they simply delay the payment of their original bills even though they have enough money and time to pay those on time. There are a lot of students who delay their academic tasks and do it at the last moment of the deadline or even miss the deadline just for their irrational delay. This is nothing but procrastination. According to Steel (2007), procrastination is "To voluntarily delay an intended course of action despite expecting to be worse off for the delay" (p. 66).

Steel (2010) developed a Pure Procrastination Scale (PPS) and Irrational Procrastination scale (IPS) which indicate that procrastination is nothing but irrational delay. Svartdal et. al. (2016) used the two scales developed by Steel (2010) to carry out a study among students and employees from Finland, Germany, Italy, Norway, Poland and Sweden and concluded that both the scales developed by Steel (2010) are very useful for measuring procrastination but PPS is particularly useful for finding out the cultural differences in case of irrational and intentional delay.

According to a study carried out by Harriott and Ferrari (1996), 20% of the respondents claimed that they are high procrastinators. Procrastination is influenced by "personal and situational factors", but it is also associated with "conscientiousness and impulsiveness". (Steel, 2007). Ackerman and Gross (2005) conducted a study with students and the result indicated that procrastination is lower for tasks that are interesting and have clear instructions. The study also found out that procrastination is not influenced by "fear, deadline pressure or the degree to which the task was perceived as difficult or time consuming". According to the study conducted by Milgram et al. (1995) on academic procrastination, it was found that students procrastinate less for tasks that are pleasant in nature. Pychyl et al. (2000) also conducted a study with students and concluded that students procrastinated more on "unpleasant, stressful and difficult tasks" compared to the pleasant ones. Ackerman and Gross (2005) also supported the fact that there will be less procrastination if the teachers develop assignments that are interesting in nature.

According to Musolino (2007), people with "the high stress conditions would likely experience more anxiety, and as a result procrastinate more, in comparison to participants in the low stress conditions".

2.3 Self-Control

Hagger et al. (2010) defined self-control as a limited resource that gets depleted over time with demanding tasks. The authors compared self-control with a muscle which loses energy and becomes tired with effortful tasks and cannot exert any further force. Self-control tends to reduce with each cognitively demanding task and needs to be replenished (Baumeister et al., 1998).

Self-Control is found to be higher among students who can delay gratification over their academic tasks (Flynn,1985; Mischel et al., 1988; Shoda et al., 1990). Tangney et al. (2004) emphasized that delay of gratification can form "a behavioral index of self-control" which results in high self-control.

According to Rothbaum et al. (1982), self-control is the way when an individual brings continuous change and adapt himself/herself to make a balanced environment between self and the world.

Tangney et al. (2004) emphasized on the benefits of having high self-control and concluded that people with high self-control can show better task performance, control their impulsive behavior such as eating problems and alcohol intake, face less psychopathological symptoms such as depression, anger, anxiety, phobias etc., have better interpersonal relationships with family and friends and feel less guilt and shame.

Sirois (2004) concluded that procrastination is positively associated with lower self-control. Thus, it can be said that people who have the tendency to procrastinate are also low in self-control and tend to avoid effortful tasks. According to Ein-Gar and Steinhart (2017), people with high self-control tend to give more value and perform better with near future tasks compared to the distant future tasks and vice versa for the people with low self-control.

2.4 Effort

Many definitions of effort can be found from the literature and effort is theoretically considered as motivation. Bandura & Cervone (1986) emphasized that motivation is nothing, but the effort exerted by the people and people put more effort when they are dissatisfied with the difference in their actual and standard performance.

According to the "law of behavior" in Economics, higher is the incentive, higher is the effort and thus better is the performance. In our case, incentive is non-monetary, and effort is not physical but cognitive in nature.

With cognitively demanding tasks where people need to put more mental effort, eventually they feel uncomfortable and try to avoid that task. Mental effort and discomfort are found to be strongly correlated in cognitively demanding tasks (Hsu et al., 2018).

Musolino (2007) conducted a study where participants in high effort condition procrastinated more compared to the participants in low effort condition and this happened due to task aversiveness.

CHAPTER 3

3.0 Theoretical Models

3.1 Extrinsic and Intrinsic Motivations

According to several literatures, external and internal motivations influence people to adopt an information technology either for getting utility or fun (Lin & Bhattacherjee, 2008; Lu & Su, 2009; Moon & Kim, 2001; Teo et al., 1999; Heijden, 2004).

Heijden (2004) explained that extrinsic motivation influences users to use an information system for obtaining benefits that are external to the user and system interaction. On the other hand, intrinsic motivation influences users to use an information system for obtaining benefits that are internal to the user and system interaction. He also defined perceived usefulness and perceived enjoyment from this very perspective. He described that the external benefits that users expect from the system can be called as perceived usefulness and the internal benefits can be called perceived enjoyment. In utilitarian systems, perceived usefulness is the dominant predictor and for hedonic systems, perceived enjoyment is the most important predictor for using the system (Heijden, 2004; Wu and Lu, 2013). According to Gneezy et al. (2011), "Individuals have a utility function with three main components: they value extrinsic rewards, enjoy doing an activity, and care about their image vis-à-vis themselves or others" (p. 192). Thus, it can be argued that an individual uses an information system because he/she gets some kind of extrinsic value or enjoy using the system.

Some authors also emphasized that perceived ease of use also motivates people to use a system. "Perceived ease of use is an assessment of the mental effort involved in the use of the system and for hedonic systems perceived ease of use is a strong predictor of intension to use compared to the perceived usefulness" (Heijden, 2004). However, some researchers have found a significant impact of perceived ease of use towards using the Internet in general (Teo et al., 1999) and also perceived ease of use as the dominant predictor of Internet compared to perceived usefulness and perceived enjoyment (Moon and Kim, 2001).

However, according to Tractinsky et al. (2000), information systems that are attractive to use and people perceive it as enjoyable are also considered easy to use.

3.2 Expectancy Theory

Vroom (1964) proposed Expectancy Theory which is all about the mental process of an individual and it says that an individual behaves or acts in a way which can bring their desirable outcomes. Therefore, the motivation of doing something is the desirability of the maximum outcome. According to this theory an individual is motivated in a particular situation by two factors: (1) by his/her expectation about the desired outcome being generated as a result of the effort he/she is putting into the task and (2) how attractive the outcome is. According to Bonner and Sprinkle (2002), these two factors are responsible for a person's decision to exert the level of effort for the outcome the person is expected to get from the effort he/she is putting into it. Thus, according to this theory, people will only put effort in a task if he/she thinks that it will bring a satisfactory result.

Steel, P. (2007) also said that an individual pursues such behaviors that has the maximum utility. He also said that enjoyable activities that are immediately realizable are high in value but if delay becomes large, attractiveness of the activity falls and utility also decreases.

3.3 Adaptive Decision-Making Theory

Payne et al. (1990) proposed the adaptive decision-making theory which states that before performing any task people weigh the costs and benefits associated with that task. The costs might involve the effort that is required to carry out the task. If the costs are higher than the benefits, then people will automatically reduce the effort which in turn reduce the performance.

According to Bonner and Sprinkle (2002), "when a task's effort requirements increase, people may respond by exerting less absolute effort than they would for a simpler task".

3.4 Theory of Reasoned Action

Theory of Reasoned Action is developed by Fishbein and Ajzen (1975) and is widely used to explain what motivates the computer use. This theory states that a person's performance depends on his behavioral intention to perform that behavior and behavioral intention depends on two factors: a person´s attitude and subjective norms. The theory suggests that stronger is the intention to perform a behavior, higher is the effort an individual put to perform that behavior.

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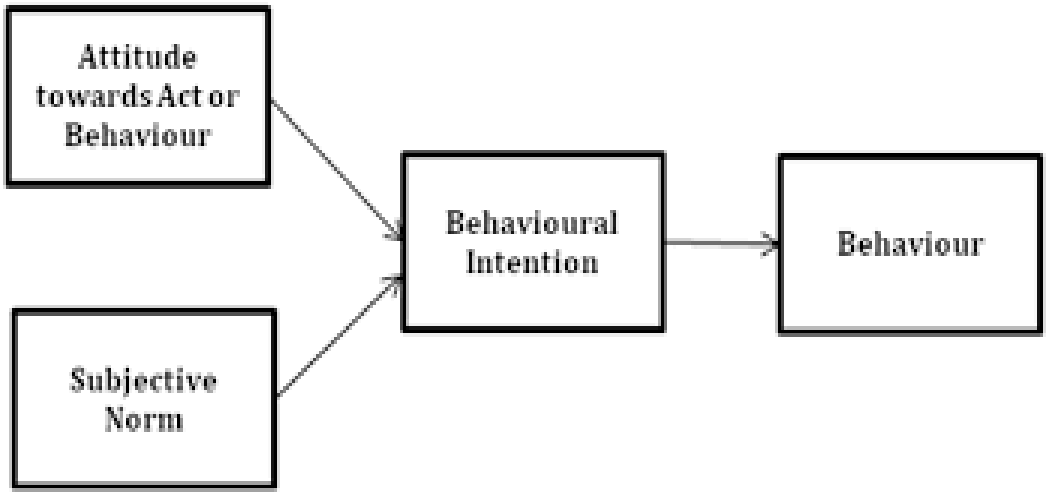

Figure 2. Theory of Reasoned Action (Fishbein and Ajzen, 1975)

Figure 2 depicts the original Theory of Reasoned Action introduced by to Fishbein and Ajzen (1975).

According to Ajzen (1991), behavioral intentions "are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior". According to Fishbein and Ajzen (1975), a person's attitude to perform an act is influenced by two factors: the strength of the belief about the outcome (the probability of the outcome) and the evaluation of the outcome (the positive consequences of the outcome). Subjective norms are the influences on our intentions by our surrounding social environment and it may include people such as family members, relatives, friends, colleagues etc. "Subjective norms are defined as a person's perception that most people who are important to him think that he or she should or should not perform the behavior in question" (Fishbein and Ajzen,1975, p. 302).

Thus, attitude and subjective norms play very critical role in forming an individual's intention to perform a behavior.

3.5 Technology Acceptance Model (TAM)

An important extension of Theory of Reasoned Action (TRA) is Technology Acceptance Model developed by Davis (1985) to understand the computer usage behavior and to explain the determinants of information technology acceptance in general. The model is actually helpful to find out the effect of "external factors on internal beliefs, attitudes and intentions" (Davis et al., 1989).

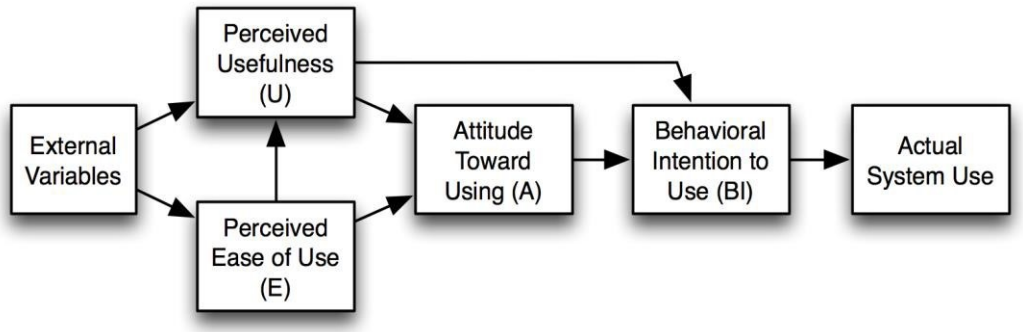

Figure 3. Technology Acceptance Model (Davis et al.,1989)

Figure 3 depicts the Technology Acceptance Model (Davis et al, 1989). According to the model, perceived usefulness and perceived ease of use are the two important factors that determine the actual computer technology use by the users. According to Davis et al (1989), "*Perceived usefulness* (U) is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context (p. 985) and *perceived ease of use* (EOU) refers to the degree to which the prospective user expects the target system to be free of effort" (p. 985).

Like TRA, TAM also states that behavioral intention (BI) determines an individual's technology use but unlike TRA, TAM states that behavioral intension is developed by an individual's attitude towards using the system and also the perceived usefulness of the system. According to Davis (1985), perceived ease of use has a direct and significant impact on perceived usefulness because other things being equal, "a system which is

easier to use will result in increased job performance (i.e., greater usefulness) for the user".

TAM is being modified several times by the researchers and one of the important modifications is being done by Davis et al. (1992). They included *perceived enjoyment* as one of the determinants that influence the behavioral intention of a user to use a system. They defined perceived enjoyment as "the extent to which the activity of using the computer is perceived to be enjoyable in its own right." The authors established a clear distinction between extrinsic motivations (perceived usefulness and perceived ease of use) and intrinsic motivations (perceived enjoyment). Many studies supported the modification done by Davis et al. (1992). According to Lin & Lu (2011), perceived enjoyment has a strong positive impact on the intention to use social networking. Heijden (2004) also did a similar experiment but he concluded that perceived enjoyment has a strong positive influence on the intention to use a hedonic system.

However, TAM has one shortcoming as it is more appropriate in case of utilitarian system use compared to the hedonic system use (Hsu & Lu, 2004; Lin & Bhattacherjee, 2010; Heijden, 2004).

3.6 Theory of Planned Behavior

Theory of planned behavior is another important extension of Fishbein and Ajzen's (1975) theory of reasoned action (TRA). It is introduced by Ajzen (1991. Like TRA, the main determinant of an individual's actual behavior is the formation of the intention to perform that behavior. Generally, the stronger the intention, the better will be the performance. However, Azjen (1991) included one more factor along with subjective norms and attitude. He added "perceived behavioral control" as the third factor which can influence the behavioral intention. According to Yang et al. (2017), *perceived behavioral control* is "a person's perception of the ease or difficulty of performing the behavior, which is assumed to consider past experience and anticipated obstacles and impediments (p. 70)".

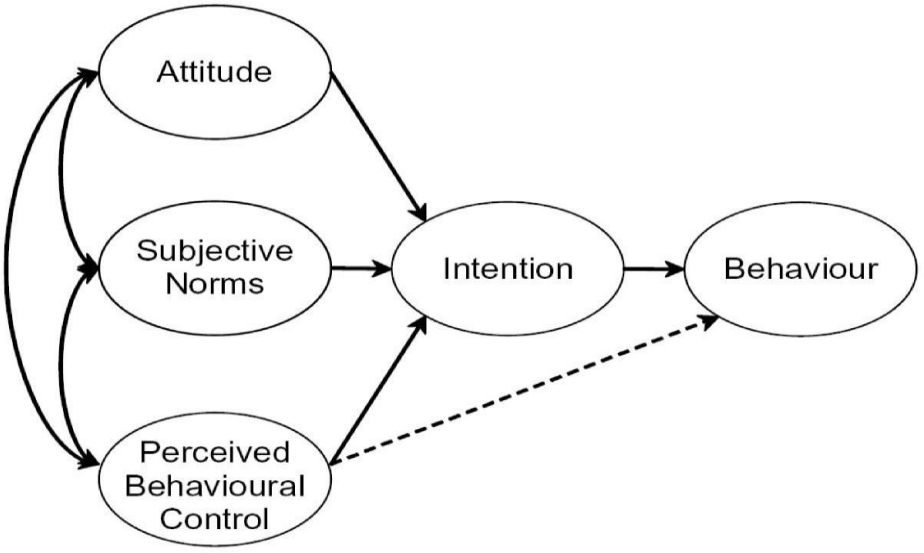

Figure 4. Theory of Planned Behavior (Azjen, 1991)

Figure 4 represents the theory of planned behavior developed by Azjen (1991). According to Azjen (1991), performance also depends on some non-motivational factors such as required resources and opportunities such as "time, money, skills, cooperation from others etc." The author said that these factors collectively can determine a person's actual behavioral control. According to the author, "a behavioral intention can find expression in behavior only if the behavior in question is under volitional control, i.e., if the person can decide at will to perform or not perform the behavior". Many researchers found that perceived behavioral control is synonymous with self-efficacy (Ajzen, 1998; Bandura, 2000). Some studies have found procrastination and self-efficacy to be negatively related (Ferrari, 1992; Tuckman, 1991). Bandura (1977) also proposed that people with high efficacy show positive behavior intention to perform a task and people with low efficacy tend to show task avoidance.

Therefore, it can be said that self-efficacy and procrastination can influence the perceived behavioral control and thus effect intention to perform.

3.7 Value-based Adoption Model

Value-based Adoption Model is developed by Kim et al. (2007). The authors proposed this model to minimize the shortcoming of Technology Acceptance Model (TAM) by considering attitude to be an important factor to understand the individual technology adoption mechanism. The main theme of this model is the cost-benefit paradigm. The

benefits includes perceived usefulness and perceived enjoyment and the cost or sacrifice includes technicality and perceived fee.

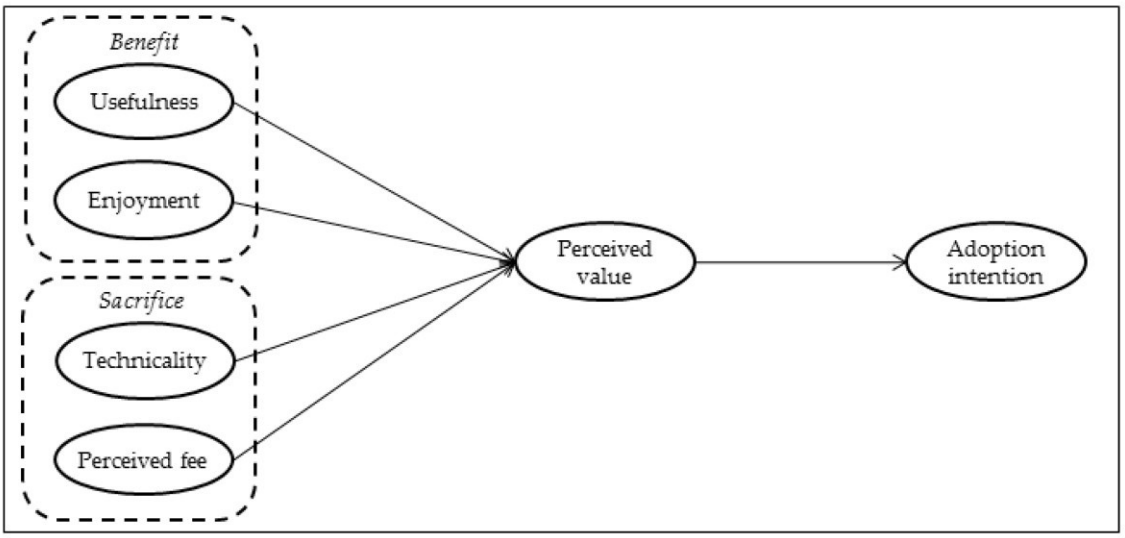

Figure 5. Value-based Adoption Model (Kim et al.,2007)

Figure 5 illustrates the Value-based Adoption Model introduced by Kim et al. (2007). According to the authors, *perceived usefulness* and *perceived enjoyment* have positive impacts on overall perceived value. Individuals analyze the consequences of their behavior in terms of the usefulness and /or enjoyment they are getting from the use of the technology. If the consequences are positive, the perceived value will be higher and vice versa. According to the authors, the costs or sacrifices include *technicality costs* which include all the non-monetary costs involved in using the technology such as "time costs, search/effort costs, convenience costs and psychological costs (inner conflict, frustration, depression, discomfort, anxiety, tension, annoyance, mental fatigue, etc." Another cost or sacrifice is *perceived fee* which includes the monetary costs required for the actual use of the technology. The authors concluded that technicality costs and perceived fee are negatively related to perceived value. Thus, higher the costs, lower is the perceived value. Kim et al. (2007) also suggested that perceived value is positively related to adoption intention. Thus, according to the utility theory of Economics, a person weighs the costs and benefits of a behavior and wants to maximize the satisfaction by realizing more benefits than the costs. Therefore, if the benefits of using a technology outweighs the costs, the perceived value will be higher which will result in forming the adoption intention. The higher is the perceived value, the stronger will be the intention.

3.8 Unified Theory of Acceptance and Use of Technology 2

Venkatesh et al. (2012) proposed the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) which is an extension of Unified Theory of Acceptance and Use of Technology (UTAUT) introduced by (Venkatesh et al. 2003). The extension is proposed as the first version of the theory was particularly to determine the behavioral intention from organizational context only. The second version (UTAUT2) is intended to determine behavioral intention to accept and use technology from consumer context.

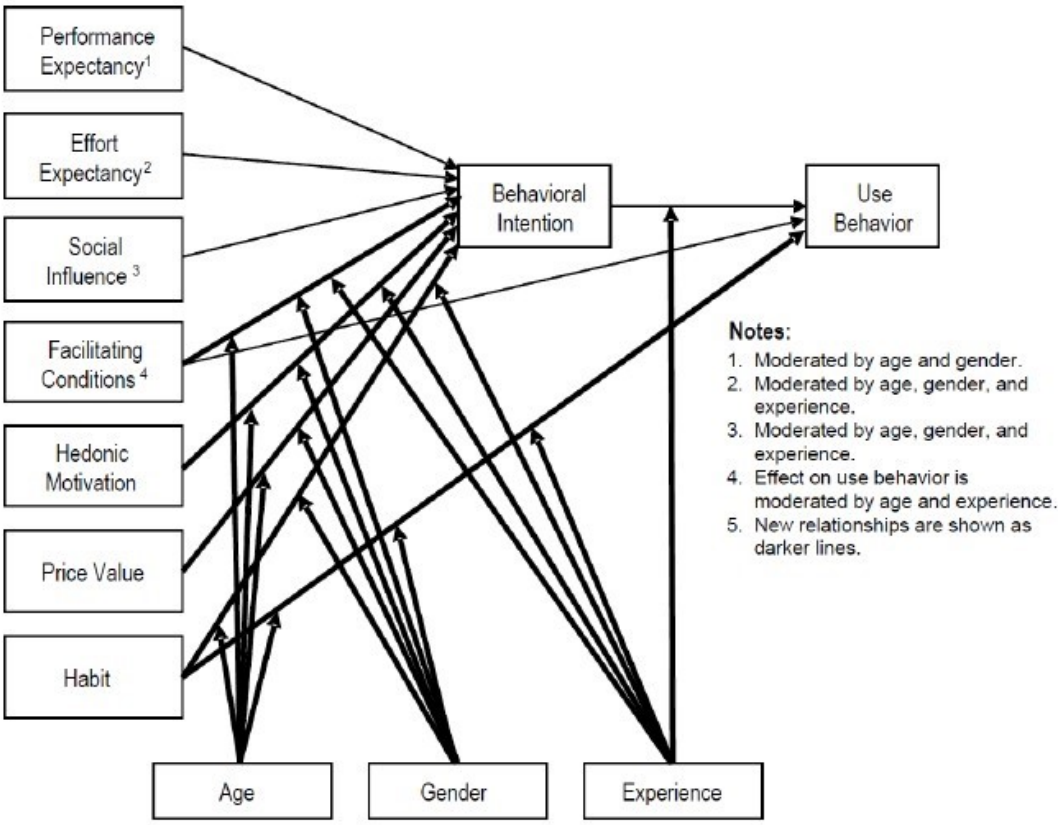

Figure 6. Unified Theory of Acceptance and Use of Technology 2 (Venkatesh et al., 2012)

Figure 6 illustrates Unified Theory of Acceptance and Use of Technology 2(UTAUT2) introduced by Venkatesh et al. 2012. There are seven factors in this theory that can influence the behavioral intention of a user to accept and adopt a technology. There are also three variables (age, gender and experience) that can influence some of the seven factors.

Performance expectancy is defined as how much a customer is benefitted by doing some specific tasks; *effort expectancy* is defined as how much comfortable a customer is in using a particular technology; *social influence* is defined as the degree of influence by

family, friends or colleagues to use a certain technology and *facilitating conditions* are referred to as the resources and support available to do a particular task (Venkatesh et al., 2012). *Hedonic motivation* is the pleasure or enjoyment that a user receives by using the technology and it has proven to be an important factor for user acceptance of technology (Brown and Venkatesh, 2005; Heijden, 2004). "Price value is defined as consumers' cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them" (Venkatesh et al.,2012, p.161). Therefore, according to the utility theory, a user tries to maximize benefits and minimize costs. The price value is positive when benefits are higher than costs and has a positive impact on forming a behavioral intention to accept and use the technology. *Experience* is defined as an individual's continuous learning about the technology from the initial use through a passage of time (Venkatesh et al. 2003). *Habit* is defined as a prior behavior (Kim and Malhotra, 2005); habit is described as a degree of the automaticity of behavior (Limayem et al. 2007). According to Venkatesh et al. (2012), "habit is a perceptual construct that reflects the results of prior experiences" (p.161).

CHAPTER 4

4.0 Hypotheses Development

4.1 Utilitarian Vs. Hedonic Online Services

Many researches have been carried out and it is proposed that products and services are purely utilitarian (productivity oriented) or hedonic (pleasure oriented) in nature. Batra and Ahtola (1991) concluded that attitude of the consumers of different products and services have two clear distinctions. i.e. utilitarian and hedonic components. Information technology is broadly classified as either utilitarian or hedonic from the perspective of actual use and functional capacity (Heijden, 2004; Massey et al., 2007). The researchers tried to emphasize that information system is not only used in work or educational settings, but it can also be used for fun or leisure activities in daily lives.

From this viewpoint, the following hypothesis is formulated.

H1: Utilitarian Online Services are at opposite poles compared to Hedonic Services.

4.2 Relationship between Procrastination and Self-Control

Self-Control has been proved to be an important determinant of procrastination (Ferrari & Emmons, 1995; Steel, 2007 and Senécal et. al, 1995). According to some authors, one of the main reasons for which people procrastinate is not being able to control their behavior and thus preferring near future enjoyable activities compared to the ones that need effort to complete (Ferrari & Emmons, 1995; Tice & Baumeister, 1997).

From that viewpoint, the next hypothesis is developed.

H2: Procrastination and Self-Control are negatively related to each other.

4.3 Importance of perceived usefulness, perceived ease of use and perceived enjoyment to the user for using online services

According to Heijden (2004), perceived ease of use and perceived enjoyment are more important predictors of behavioral intention to accept and use hedonic systems as in case of hedonic systems "the achievement of external goals is subordinate to using the system itself." According to the author, as perceived ease of use and perceived enjoyment are intrinsic motivators, they are more related to hedonic services. On the other hand, as in utilitarian systems "the interaction with the system is subordinate to the achievement of external goals", perceived ease of use is less important and perceived usefulness is more important for forming users' intention to use an online service.

From this viewpoint the next hypothesis is formulated.

H3: Perceived ease of use is more associated with perceived enjoyment for hedonic services than perceived usefulness for utilitarian services.

4.4 Effort required for the consumption of online services

Laran and Janiszewski (2011) in their study on undergraduate students demonstrated that people get mentally exhausted while doing any cognitively demanding task (utilitarian tasks) and the loss of self-control reduces their subsequent performances. However, if people do any task that are pleasure-oriented (hedonic tasks) in nature, it revitalizes their self-control (Öörni et. al., 2017).

From this perspective, the next hypothesis is developed.

H4: Utilitarian Online Services are more effortful compared to the Hedonic Online Services.

CHAPTER 5

5.0 Research Methodology

This chapter presents the tools and techniques used for the empirical part of this research. Firstly, this chapter discusses about the data collection tool and the research technique that are used for the analysis presented in this thesis. Then, it illustrates the details about the participants who shared their valuable responses. Lastly, it describes about how the questionnaire is formulated.

5.1 Data Collection and Research Technique

The data is collected by formulating a survey questionnaire. The link of the survey questionnaire was sent to 180 people through Facebook Messenger. The survey was sent to all the Facebook friends of the author. The survey was intended towards people who had knowledge of using online services regardless of their age, gender, education and region. The target population included undergraduate and graduate students from Finland and other regions as well. It also included professionals from different fields like IT, Healthcare, Business and other Social Science related fields. In general, this survey was designed for anyone who was the user of different available online services. Question number 4 asked whether the respondent use online services. If the answer is positive, the respondent can answer the next 20 questions, otherwise the person cannot proceed with answering the next questions. Out of 180 people, 70 people completed and submitted the survey.

The thesis used a mixed method for analyzing the data. It used the quantitative method for analyzing the statistical data and qualitative method to explain the results based on existing theories. According to SIS International Research website, “quantitative research involves the use of computational, statistical, and mathematical tools to derive results; and qualitative research is generally more explorative, that is dependent on the collection of verbal, behavioral or observational data that can be interpreted in a subjective manner and it has a wide scope and is typically used to explore the causes of potential problems that may exist.” The website also states that “qualitative research often either precede or be conducted after quantitative research, depending on the study’s objectives.”

5.2 Participants

Table 1 depicts the demographic characteristics of the participants and also illustrates their online service usage information.

Among seventy respondents, the majority of the participants (92.9%) have university/professional qualification and the remaining 7.1% are in college or have qualification up to college level. More than half of the respondents are males (58.6%) and 41.4% are females. Most of the respondents (87.1%) are young adults with an age range between 19 to 35. Only 6 people out of 70 respondents are in the age range between 36 to 55 and the remaining 3 people are in the age range of 0 –18.

All the respondents use online services. Most of them use the online services very frequently (41.4%) and frequently (41.4%). Some respondents (14.3%) use online services occasionally and an insignificant number of respondents (2.9%) use the services rarely.

Table 1. Demographic Characteristics of the Participants

Education		
	Frequency (n = 70)	**Percentage (%)**
College	5	7.1
University/Professional Education	65	92.9
Total	**70**	**100**
Gender		
	Frequency (n = 70)	**Percentage (%)**
Male	41	58.6
Female	29	41.4
Total	**70**	**100**
Age Group (in years)		
	Frequency (n = 70)	**Percentage (%)**
0 - 18	3	4.3
19 - 35	61	87.1
36 - 55	6	8.6
Total	**70**	**100**
Use of Online Services		
	Frequency (n = 70)	**Percentage (%)**
Yes	70	100
Frequency of Use		
	Frequency (n = 70)	**Percentage (%)**
Very Frequently	29	41.4
Frequently	29	41.4
Occasionally	10	14.3
Rarely	2	2.9
Total	**70**	**100**

5.3 Questionnaire Formation

The questionnaire contains 24 questions. First five questions are focused to indicate the general aspects of the user. Next four questions are based on understanding the behavioral aspects of the user and the last 15 questions are based on the user's perception about using different online services. There are 12 online services where 6 of them are productivity-oriented in nature (Online learning or training courses, Online Communication Services used in work, Job searching sites, Real Time Online Information Services, E-Government Services and Online banks and insurance services) and the remaining 6 are pleasure-

oriented in nature (Social Networking, Online Shopping, Audio and Video Streaming, Online Games, Online Photo Editing and Blogs). However, the participants were not being told about the distinction about the type of services (utilitarian/hedonic) as the study also aims to observe how the participants actually perceive the services and whether we can strictly differentiate among utilitarian and hedonic services.

Question number 10 to 24 contain the 7-point Likert Scale where 1 =Strongly Agree, 2=Agree, 3 = Somewhat Agree, 4= Neutral, 5= Somewhat Disagree, 6 = Disagree and 7 = Strongly Disagree. Users are required to mark any point on the Likert Scale based on their perception for the use of each of the twelve online services.

The questions about the behavioral aspects of the users (Question 6 to 9) such as *"Do you prefer completing tasks (academic or official) on time?" (Proc1), "Do your leisure activities interfere with your tasks (academic or official)?" (SC1), "Do your emotional distractions hamper your task performance?" (SC2)* and *"Do you have any psychological issues e.g. panic and other anxiety disorders, antisocial, personality disorder, depression, aggression, and/or anger management problems)?" (SC3)* are ideated from the study done by Tangney et al. (2004). The main motive to use these questions in the questionnaire is to find out whether the user is a procrastinator and/or whether they have emotional distractions or psychological issues that may affect their self-control mechanism. The authors conducted two studies with undergraduate students and found that students with higher self-control had better grades and thus it can be predicted that people with high self-control can control their emotions and can make a balance in their lives and become more successful compared to the people with low self-control. Question number 6 to 8 were intended to measure procrastination and self-control among the participants. The authors also concluded that people who had high self-control experienced less psychological problems or it could be other way around i.e. people who were already going through some psychological problems could have lower self-control. Thus, question number 9 was intended to indirectly measure self-control.

Question number 11 ("*I often delay the following online services for later use" (Proc2))* also helps to understand the propensity of procrastination in a user. This question was inspired from the work of Steel (2007), according to whom procrastination is nothing but intentional delay.

Question number 10 ("*I feel tired and exhausted while or after using the following online services"(Effort1))*, 16 ("*I feel stressed while or after using the following online services"(Effort2)*) and 18 ("*I feel that using the following online services requires a lot of mental effort"(Effort3)*) are intended to measure how cognitively effortful is the use of the twelve online services to the user. These questions were developed after getting inspirations from two literatures. Mental effort and discomfort are concluded to be strongly and positively correlated in cognitively demanding tasks (Hsu et al., 2018) and people get mentally exhausted and stressed by performing any cognitively demanding tasks (Laran and Janiszewski (2011) and get energized if they perform tasks that are enjoyable and fun in nature (Öörni et. al., 2017).

Question number 15 ("*I feel the following online services are useful for me*" *(PU))* is designed to measure the perceived usefulness of the online services to the users. The development of this question was inspired from the Technology Acceptance Model (Davis et al, 1989). According to the model, perceived usefulness is an important factor to determine the acceptance and use of a technology.

Question number 12 ("*I feel comfortable to use the following online services"(PEOU1))*, 19 *("The interaction with the following online services is clear and understandable"(PEOU2)* and 20 ("*I feel that the following online services are easy to use"(PEOU3))* are used to understand the perceived ease of use for using the online services from users' perspective. As perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p.320) and as cognitive effort and discomfort were found to be strongly correlated with cognitive demanding tasks ((Hsu et al., 2018), it can be derived that perceived ease of use is the comfortableness of using a system. Question number 12 was developed from that standpoint. Question number 19 and 20 were adapted from Venkatesh and Davis (2000) to analyze perceived ease of use for the chosen online services.

Question number 13 (*"I enjoy using the following online services"(PE1))*, 14 *("I feel excited to use the following online services"(PE2)*) and 17 *("I feel energized while or after using the following services"(PE3))* are constructed to measure the perceived enjoyment a user gets by using the online services. Question number 13 and 14 were inspired from the study conducted by Venkatesh et al. 2012) and question number 17 was inspired from the literature by Öörni et. al. (2017) where the authors suggested that people get revitalized by using services that are entertaining in nature.

Question number 21 to 24 (*Enjoyable (PE4)? Exciting (PE5)? Pleasant (PE6)? and Interesting (PE7)?* are included from Cheung et al. (2000) and Igbaria et al. (1995) to measure the perceived enjoyment a user receives by using the online services.

Question number 6 to 24 are coded shortly as Procrastination = Proc, Self-Control = SC, Cognitive Effort = Effort, Perceived Usefulness = PU, Perceived Ease of Use = PEOU and Perceived Enjoyment = PE.

5.4 Statistical Methods

The online services are divided into two groups and different statistical methods are applied. The first group consisted of 6 hedonic natured online services such as Social Networking, Online Shopping, Audio and Video Streaming, Online Games, Online Photo Editing and Blogs. The second group consisted of 6 utilitarian natured online services such as Online learning or training courses, Online Communication Services used in work, Job searching sites, Real Time Online Information Services, E-Government Services and Online banks and insurance services. Thus, the number of observations in each group is 420 (*N=70*6*).

The principal component factor analysis was conducted separately with two groups to test whether the questions developed for the survey can actually measure what they were intended to measure. Principal component Analysis (PCA) is one of the most used factor extraction technique. In this thesis, the rotation method used in PCA is Varimax. According to Akhtar-Danesh (2017), varimax is "an orthogonal rotation technique that minimizes the number of variables with high loadings, either positive or negative, for each factor and generates factors with relatively equal importance". The factor loadings indicate how the variables are correlated with each underlying factor. The factor loadings below 0.4 are omitted in this thesis for clarity.

Next, Pearson's Correlation was carried out to analyze the relationship among the variables which would be useful for testing the hypotheses. This method helps to identify the strength and direction of association between two variables. According to Cohen (1988), if the value of r is 0.1, it is regarded as small, if the value of r is 0.3, it is regarded as medium and if the value of r is 0.5, it is regarded as large. In this thesis, medium to strong relationship between the variables were observed and analyzed.

Lastly, reliability analysis was conducted for two groups to make sure that the scale developed to measure different constructs was reliable and consistent in nature. Reliability of the scale developed in this thesis was measured by Cronbach Alpha which was developed by Lee Cronbach in 1951. It measures the internal consistency of a test or a scale and takes a value between 0 to 1. The higher the value of alpha, higher is the internal consistency and thus higher is the reliability of the test or scale. Tavakol and Dennick (2011) suggested acceptable alpha value between 0.7 to 0.9 and if it is higher than 0.9, it means there are redundant questions in the test or scale.

CHAPTER 6

6.0 Results Analysis

6.1 Analysis for Hedonic Online Services

Table 2 illustrates the varimax rotation analysis for the 6 Hedonic Online Services. The result shows that the variables are grouped into four principal factors.

It can be observed that all the items intended to measure *Perceived Enjoyment* and *Perceived Ease of Use are* grouped in factor 1 with high loading values. Surprisingly, Perceived Usefulness is also grouped in factor 1. This result can be described with the help of Value-based Adoption Model introduced by Kim et al. (2007). The authors said that people calculate the usefulness and /or enjoyment they receive from using a technology and then take decision whether to use the technology. Thus, for hedonic IT use, perceived enjoyment might be the most important factor to use the technology, but people also give importance to perceived usefulness. For example, social networking can be a hedonic platform, but it is also useful for the people who want to be socially involved with family, relatives, friends and colleagues. Not only that, social networks are now used heavily for establishing and maintaining online businesses. From that point of view, hedonic online services are not considered for enjoyment purpose only but also for the usefulness people receive from those services. According to Technology Acceptance Model (Davis et al, 1989), perceived usefulness and perceived ease of use are considered to be the main factors for determining the attitude towards accepting and using a technology. On the other hand, Heijden (2004) proved that perceived ease of use and perceived enjoyment are more important determinants to form behavioral intention towards using a technology. Therefore, factor 1 for hedonic online services represents *the measure of perceived enjoyment, perceived usefulness and perceived ease of use.*

In factor 2, all the items intended to measure effort and one item intended to measure procrastination *(Proc2: I often delay the following online services for later use*?) are grouped together. It is understandable that the tasks that are cognitively effortful in nature makes people procrastinate more as they lose their self-control over time. Therefore, factor 2 for hedonic online services represents *the measure of cognitive effort and procrastination.*

In factor 3, self-control measuring items like SC1 (*Do your leisure activities interfere with your tasks (academic or official)?*) and SC2 (*Do your emotional distractions hamper your task performance*?) are grouped along with Procrastination measuring item (Proc1: *Do you prefer completing tasks (academic or official) on time*?). This is also understandable as people who cannot control their impulsiveness and emotional distractions are likely to lose self-control and procrastinate more. Therefore, factor 3 for hedonic online services represents the measure of *self-control and procrastination.*

In factor 4 only item SC3 can be observed and is not grouped with other items of Self-control. Therefore, it can be the measure of psychological problems which according to Tangney (2004) can lead to low self-control or low self-control may lead to psychological issues.

Table 2. Rotated Component Matrix for variables in Hedonic Online Services

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
PE7	0.873			
PE4	0.862			
PE6	0.862			
PE1	0.859			
PE2	0.837			
PE5	0.816			
PEOU1	0.782			
PEOU2	0.736			
PU	0.693			
PE3	0.651			
PEOU3	0.649			
Effort1		0.805		
Proc2		0.775		
Effort3		0.770		
Effort2		0.738		
SC2			0.852	
SC1			0.825	
Proc1			-0.612	
SC3				0.865
PE= Perceived Enjoyment; PEOU = Perceived Ease of Use; PU = Perceived Usefulness; Effort = Cognitive Effort; SC = Self-Control; and Proc= Procrastination				
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]				
a. Rotation converged in 4 iterations.				

Table 3. Reliability Test for the variables in Hedonic Online Services

Reliability Statistics	
Cronbach's Alpha	N of Items
0.791	19

Table 3 shows the reliability testing for the constructs developed for the hedonic online services. The value of Cronbach's Alpha is 0.791 which indicates that the scale is highly reliable as it has high internal consistency.

Table 4 depicts the Pearson's Correlation matrix for all the variables present in hedonic online services. In this thesis, only medium to high correlation among different types of variables are discussed. Association among same types of variables such as relationships among all Perceived Enjoyment constructs (PE1 to PE7) would be certainly high and this is not discussed in this thesis.

It can be observed that procrastination and self-control are moderately and negatively correlated (-.329**) as higher is the self-control among people, lower will be the tendency to procrastinate as they can easily control their behavior.

Procrastination and Effort are found to be positively correlated (.544**, .481** and .439**). According to Adaptive Decision-Making Theory proposed by Payne et al. (1990), people usually weigh the costs and benefits before performing any behavior and if the costs exceeds benefits, they reduce their effort which make them delay in performing that particular task. Thus, a cognitively demanding tasks tend to reduce the limited cognitive resources people possess and thus resulting in procrastination. It can also be observed that Effort and Self-Control are negatively correlated (-.314**). Thus, a cognitively demanding tasks tend to reduce the limited cognitive resources people possess and thus resulting in procrastination.

Next, it can be observed that all the Perceived Enjoyment (PE1 to PE7) constructs are strongly and positively correlated with all the Perceived Ease of Use (PEOU 1 to PEOU2) constructs. As it is discussed before, many authors have already found that perceived enjoyment and perceived ease of use are both important predictors for accepting and using a hedonic system.

As it is already discussed in factor rotation part that surprisingly perceived usefulness is found to be moderately to highly correlated with perceived enjoyment and perceived ease of use. Thus, people consider hedonic services not only enjoyable but also useful for them and one reason can be that as they find the hedonic services easy to use, they consider them useful.

All the Perceived Enjoyment constructs are negatively correlated to Effort constructs. It is quite plausible as people do not enjoy performing activities that require cognitive effort. People enjoy using hedonic services as they don't have to put a lot of mental effort to use the technology as cognitively demanding tasks make people exhausted.

Table 4. Pearson's Correlation for variables in Hedonic Online Services

Pearson's Correlations																			
	Proc1	SC1	SC2	SC3	Effort1	Proc2	PEOU1	PE1	PE2	PU	Effort2	PE3	Effort3	PEOU2	PEOU3	PE4	PE5	PE6	PE7
Proc1	1	-.226**	-0.329	-0.032	0.028	.105*	-.153**	-.147**	-0.059	-0.088	.190**	-0.011	.117*	-.127**	-0.068	-.126**	-.148**	-0.060	-0.075
SC1	-.226**	1	.670**	.175**	-0.031	-.114*	0.012	0.047	0.024	0.012	-0.314	0.048	-0.058	0.083	-0.014	0.095	.195**	.118*	.183**
SC2	-.329**	.670**	1	.240**	-0.048	-.117*	0.095	.108*	0.078	0.046	-.291**	0.081	-.125*	.130**	-0.038	.104*	.210**	.173**	.179**
SC3	-0.032	.175**	.240**	1	-0.072	.127**	0.043	0.061	.098*	.099*	-.134**	0.052	-0.073	0.037	-0.039	0.014	.104*	.137**	.178**
Effort1	0.028	-0.031	-0.048	-0.072	1	.544**	-.286**	-.293**	-.247**	-0.068	.513**	-.105*	.448**	-0.092	-.122*	-.208**	-.201**	-.195**	-.199**
Proc2	.105*	-.114*	-.117*	.127**	.544**	1	-.195**	-.199**	-.184**	-0.075	.481**	-.110*	.439**	-.099*	-0.089	-.148**	-.177**	-.169**	-.100*
PEOU1	-.153**	0.012	0.095	0.043	-.286**	-.195**	1	.793**	.734**	.535**	-.293**	.419**	-.150**	.575**	.418**	.611**	.547**	.652**	.618**
PE1	-.147**	0.047	.108*	0.061	-.293**	-.199**	.793**	1	.786**	.609**	-.261**	.513**	-.118*	.576**	.462**	.702**	.668**	.709**	.714**
PE2	-0.059	0.024	0.078	.098*	-.247**	-.184**	.734**	.786**	1	.603**	-.253**	.563**	-.150**	.549**	.458**	.690**	.643**	.653**	.667**
PU	-0.088	0.012	0.046	.099*	-0.068	-0.075	.535**	.609**	.603**	1	-.149**	.432**	0.007	.379**	.375**	.522**	.463**	.520**	.533**
Effort2	.190**	-.314**	-.291**	-.134**	.513**	.481**	-.293**	-.261**	-.253**	-.149**	1	-.237**	.549**	-.194**	-.171**	-.341**	-.343**	-.312**	-.302**
PE3	-0.011	0.048	0.081	0.052	-.105*	-.110*	.419**	.513**	.563**	.432**	-.237**	1	-.194**	.421**	.401**	.514**	.492**	.540**	.550**
Effort3	.117*	-0.058	-.125*	-0.073	.448**	.439**	-.150**	-.118*	-.150**	0.007	.549**	-.194**	1	-.151**	-.162**	-.130**	-.153**	-.121*	-0.069
PEOU2	-.127**	0.083	.130**	0.037	-0.092	-.099*	.575**	.576**	.549**	.379**	-.194**	.421**	-.151**	1	.477**	.605**	.581**	.669**	.624**
PEOU3	-0.068	-0.014	-0.038	-0.039	-.122*	-0.089	.418**	.462**	.458**	.375**	-.171**	.401**	-.162**	.477**	1	.595**	.489**	.489**	.545**
PE4	-.126**	0.095	.104*	0.014	-.208**	-.148**	.611**	.702**	.690**	.522**	-.341**	.514**	-.130**	.605**	.595**	1	.788**	.756**	.766**
PE5	-.148**	.195**	.210**	.104*	-.201**	-.177**	.547**	.668**	.643**	.463**	-.343**	.492**	-.153**	.581**	.489**	.788**	1	.765**	.811**
PE6	-0.060	.118*	.173**	.137**	-.195**	-.169**	.652**	.709**	.653**	.520**	-.312**	.540**	-.121*	.669**	.489**	.756**	.765**	1	.816**
PE7	-0.075	.183**	.179**	.178**	-.199**	-.100*	.618**	.714**	.667**	.533**	-.302**	.550**	-0.069	.624**	.545**	.766**	.811**	.816**	1

PE= Perceived Enjoyment; PEOU = Perceived Ease of Use; PU = Perceived Usefulness; Effort = Cognitive Effort; SC = Self-Control; and Proc= Procrastination

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

*. Correlation is significant at the 0.05 level (2-tailed).

6.2 Analysis for Utilitarian Online Services

Table 3 demonstrates the varimax rotation analysis for the 6 Utilitarian Online Services. The result shows that the variables are grouped into four principal factors.

It can be observed that all the items intended to measure Perceived Enjoyment and Perceived Ease of Use are grouped in factor 1 with high loading values as in the case of Hedonic Online Services. However, unlike hedonic services, here perceived usefulness is not grouped with perceived enjoyment and perceived ease of use. Thus, factor 1 is *the measurement of perceived enjoyment and perceived ease of use* in utilitarian online services.

In factor 2, all the items intended to measure effort and one item intended to measure procrastination (Proc2: I often delay the following online services for later use?) are grouped together as in the case of hedonic online services. Therefore, factor 2 for utilitarian online services represents the measure of *cognitive effort and procrastination.*

In factor 3, self-control measuring items like SC1 (*Do your leisure activities interfere with your tasks (academic or official)?*) and SC2 (*Do your emotional distractions hamper your task performance*?) are grouped together. Therefore, factor 3 for utilitarian online services represents the measure of *self-control.*

Unlike hedonic online services, perceived usefulness measuring item (PU) is categorized in factor 4. Although, self-control (SC3) item is also grouped with perceived usefulness, no such relationship is intended to measure by the developed scale and as it has a low factor loading value, it can be omitted from the analysis. Therefore, factor 4 is the measurement of *perceived usefulness* in utilitarian online services.

In factor 5, perceived ease of use (PEOU2) is grouped with Procrastination (Proc1). It can be said that if a technology is easy to use and there is clear interaction between the system and the user then a user will be interested to use and accept is more and procrastinate less. According to the Unified Theory of Acceptance and Use of Technology 2(UTAUT2) proposed by Venkatesh et al. 2012, facilitating conditions can influence users' intention to use a particular technology. Thus, if the service developers can provide resources and support to make the online services easy and understandable by the users, then they will be more interested to use the services. Therefore, factor 4 is

the measurement of *perceived ease of use and procrastination* in utilitarian online services.

Table 5. Rotated Component Matrix for variables in Utilitarian Online Services

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
PE7	0.885				
PE6	0.884				
PE5	0.826				
PE2	0.818				
PE4	0.817				
PE1	0.806				
PE3	0.731				
PEOU3	0.664				
PEOU1	0.648				
Effort2		0.769			
Proc2		0.755			
Effort1		0.744			
Effort3		0.687			
SC2			0.878		
SC1			0.874		
PU				0.843	
SC3				0.401	
PEOU2	0.436				0.613
Proc1					-0.598
PE= Perceived Enjoyment; PEOU = Perceived Ease of Use; PU = Perceived Usefulness; Effort = Cognitive Effort; SC = Self-Control; and Proc= Procrastination					
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]					
a. Rotation converged in 7 iterations.					

Table 6. Reliability Test for the variables in Utilitarian Online Services

Reliability Statistics	
Cronbach's Alpha	N of Items
0.754	19

Table 6 shows the reliability testing for the constructs developed for the utilitarian online services. The value of Cronbach's Alpha is 0.754 which indicates that the scale is highly reliable as it has high internal consistency.

Table 7 depicts the Pearson's Correlation matrix for all the variables present in utilitarian online services. In this thesis, only medium to high correlation among different types of variables are discussed.

It can be observed that procrastination and self-control are moderately and negatively correlated (-.329**) as in hedonic online services.

Procrastination and Effort are found to be positively correlated (.558** and .523**). However, the correlation is stronger in case of utilitarian online services compared to the hedonic online services. This is because as utilitarian services require more effort, people tend to procrastinate more because increased effort.

Effort and Perceived Ease of Use are observed to be moderately and negatively related (-.320** and -.334**). This is obvious that if a system is easy to use, it requires less effort and vice versa. In case of hedonic services this association was weak.

Effort and Perceived Enjoyment are found to be moderately and negatively associated (-.435** and -.334**). This is logical because if using an online service requires more effort, the perceived pleasure decreases. However, the correlation is stronger compared to hedonic services as utilitarian services requires more effort it reduces the pleasure a person gets by using the services.

Perceived usefulness is found to be positively but weakly correlated with perceived enjoyment and perceived ease of use. In case of hedonic services, this association was stronger.

Next, it can be observed that all the Perceived Enjoyment (PE1 to PE7) constructs are positively correlated with all the Perceived Ease of Use (PEOU 1 to PEOU2) constructs. However, the associations are mostly moderate in nature. Conversely, in case of hedonic services the associations are mostly strong in nature. This is also understandable as in utilitarian services perceived ease of use is low, perceived enjoyment is also low.

Table 7. Pearson's Correlation for the variables in Utilitarian Online Services

Pearson's Correlations																			
	Proc1	SC1	SC2	SC3	Effort1	Proc2	PEOU1	PE1	PE2	PU	Effort2	PE3	Effort3	PEOU2	PEOU3	PE4	PE5	PE6	PE7
Proc1	1	-.226**	-.329**	-0.032	-.234**	-.254**	.294**	.222**	.222**	-0.077	-.098*	.280**	0.076	-0.015	.186**	.188**	.193**	.263**	.254**
SC1	-.226**	1	.670**	.175**	.250**	.117*	-.160**	-.113*	-0.046	0.041	-0.083	-0.082	-.125*	-0.039	-0.053	-0.057	-.107*	-0.094	-0.059
SC2	-.329**	.670**	1	.240**	.233**	.100*	-.234**	-.130**	-0.057	.114*	-0.022	-0.080	-0.080	-0.090	-.133**	-0.050	-.100*	-.140**	-.134**
SC3	-0.032	.175**	.240**	1	.159**	.221**	-0.065	-0.081	-0.051	.099*	0.095	-.112*	0.058	-0.061	-.125*	-.119*	-.143**	-.108*	-0.044
Effort1	-.234**	.250**	.233**	.159**	1	.558**	-.320**	-.435**	-.232**	-0.054	.461**	-.154**	.323**	-0.058	-.225**	-.176**	-.207**	-.237**	-.278**
Proc2	-.254**	.117*	.100*	.221**	.558**	1	-.261**	-.263**	-.161**	.105*	.523**	-.128**	.284**	0.046	-.178**	-.180**	-.178**	-.147**	-.146**
PEOU1	.294**	-.160**	-.234**	-0.065	-.320**	-.261**	1	.714**	.613**	.175**	-.334**	.392**	0.022	.278**	.407**	.495**	.437**	.554**	.556**
PE1	.222**	-.113*	-.130**	-0.081	-.435**	-.263**	.714**	1	.798**	.164**	-.334**	.569**	0.006	.335**	.467**	.618**	.610**	.686**	.706**
PE2	.222**	-0.046	-0.057	-0.051	-.232**	-.161**	.613**	.798**	1	.264**	-.261**	.659**	0.094	.244**	.411**	.632**	.637**	.638**	.667**
PU	-0.077	0.041	.114*	.099*	-0.054	.105*	.175**	.164**	.264**	1	-0.043	.303**	.124*	.202**	0.070	.204**	0.062	.182**	.208**
Effort2	-.098*	-0.083	-0.022	0.095	.461**	.523**	-.334**	-.334**	-.261**	-0.043	1	-.162**	.384**	0.021	-.179**	-.294**	-.284**	-.211**	-.260**
PE3	.280**	-0.082	-0.080	-.112*	-.154**	-.128**	.392**	.569**	.659**	.303**	-.162**	1	.156**	.252**	.434**	.491**	.544**	.619**	.572**
Effort3	0.076	-.125*	-0.080	0.058	.323**	.284**	0.022	0.006	0.094	.124*	.384**	.156**	1	0.026	-0.080	0.014	0.042	.142**	.128**
PEOU2	-0.015	-0.039	-0.090	-0.061	-0.058	0.046	.278**	.335**	.244**	.202**	0.021	.252**	0.026	1	.354**	.351**	.340**	.411**	.369**
PEOU3	.186**	-0.053	-.133**	-.125*	-.225**	-.178**	.407**	.467**	.411**	0.070	-.179**	.434**	-0.080	.354**	1	.604**	.516**	.521**	.544**
PE4	.188**	-0.057	-0.050	-.119*	-.176**	-.180**	.495**	.618**	.632**	.204**	-.294**	.491**	0.014	.351**	.604**	1	.660**	.666**	
PE5	.193**	-.107*	-.100*	-.143**	-.207**	-.178**	.437**	.610**	.637**	0.062	-.284**	.544**	0.042	.340**	.516**	.660**	1	.733**	
PE6	.263**	-0.094	-.140**	-.108*	-.237**	-.147**	.554**	.686**	.638**	.182**	-.211**	.619**	.142**	.411**	.521**	.666**	.733**	1	
PE7	.254**	-0.059	-.134**	-0.044	-.278**	-.146**	.556**	.706**	.667**	.208**	-.260**	.572**	.128**	.369**	.544**	.718**	.710**	.853**	1

PE= Perceived Enjoyment; PEOU = Perceived Ease of Use; PU = Perceived Usefulness; Effort = Cognitive Effort; SC = Self-Control; and Proc= Procrastination

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

*. Correlation is significant at the 0.05 level (2-tailed).

CHAPTER 7

7.0 Hypothesis Testing

After the data analysis, this section discusses whether the hypotheses that were being formulated earlier in Chapter 4 can be accepted or rejected.

7.1 Hypothesis 1

H1: Utilitarian Online Services are at opposite poles compared to Hedonic Services.

Many researchers have suggested that utilitarian IT is purely productivity oriented in nature and hedonic IT is purely pleasure oriented in nature. However, in this analysis it is found that there is an association of perceived usefulness and perceived enjoyment in both Hedonic and Utilitarian Online Services. However, the association is stronger in case of Hedonic Online Services. Thus, it can be concluded that these two types of services cannot be put into opposite poles, rather hedonic IT can be considered to be useful by the users and utilitarian IT can be considered to be partially enjoyable in nature. Some researchers already emphasized that these two types of IT cannot be separated into two opposite poles and hedonic IT can possess utilitarian features in it and utilitarian IT can have hedonic features in it (Sun and Zhang, 2006; Starbuck & Webster, 1991). The two-dimensional scale developed by Chesney (2006) that is elaborated earlier in Chapter 2, to measure acceptance of information system depending on the context of use can be particularly helpful to understand this phenomenon.

Therefore, Hypothesis 1 is rejected in this thesis based on the Pearson's Correlation analysis.

7.2 Hypothesis 2

H2: Procrastination and Self-Control are negatively related to each other.

In Pearson's Correlation Matrix, it can be observed that Procrastination and Self-control are negatively associated. Thus, it can be concluded that people who have lower self-control become exhausted more easily compared to the people who have high self-

control. As concluded by Tangney et.al (2004), people with low self-control fail to have a balance in life and give rise to a stressful situation and have more tendency to procrastinate.

Therefore, it can be concluded that this thesis failed to reject Hypothesis 2.

7.3 Hypothesis 3

H3: Perceived ease of use is more associated with perceived enjoyment for hedonic services than perceived usefulness for utilitarian services.

From the Pearson's Correlation analysis, it can be clearly seen that Perceived Enjoyment and Perceived Ease of Use are strongly associated with each other in case of Hedonic Online Services whereas in Utilitarian Online Services the relationship between Perceived Usefulness and Perceived Ease of Use is weak in nature. Thus, it can be concluded that Perceived ease of use and perceived enjoyment are more important indicator of technology acceptance for hedonic services compared to the perceived usefulness and perceived ease of use in utilitarian online services.

Therefore, it can be concluded that this thesis failed to reject Hypothesis 3.

7.4 Hypothesis 4

H4: Utilitarian Online Services are more effortful compared to the Hedonic Online Services.

For testing this hypothesis, t-Test (Two-Sample Assuming Unequal Variances) is carried out. Question number 18 ("*I feel that using the following online services requires a lot of mental effort" (Effort3*)) is used as the variable for comparing cognitive effort between Utilitarian and Hedonic Online Services as this question asks about mental effort required for using the services directly.

Table 8. T-Test for comparing Effort in Hedonic Online Services

t-Test: Two-Sample Assuming Unequal Variances		
	Effort3 (Hedonic)	***Effort3 (Utilitarian)***
Mean	3.49	3.08
Variance	3.35	2.36
Observations	420.00	420.00
Hypothesized Mean Difference	0.00	
df	814.00	
t Stat	3.49	
P(T<=t) one-tail	0.00	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.00	
t Critical two-tail	1.96	
Significance Level = 5%		

Table 8 shows the T-Test for comparing effort-fullness in Hedonic and Utilitarian Online Services. As the t stat value (3.49) is larger than the t Critical two-tail value (1.96) we reject H0 and fail to reject H1.

Thus, it can be concluded that Utilitarian Online Services are more effortful compared to the Hedonic Online Services.

Chapter 8

8.0 Conclusion

In Chapter 2 a number of popular theoretical models are described which are used in different fields to determine the behavioral intention of a user to accept and reject a product or service. All these models discussed about different salient and latent factors that can influence a person's intention to use a product or service. After analyzing the data in this thesis, it can be concluded that perceived enjoyment, perceived ease of use and perceived usefulness can influence the use of online services in different degrees regardless of whether the services are hedonic or utilitarian in nature. It can also be concluded that utilitarian and hedonic services are not at the opposite poles rather one is complementary for the other. Self-control and procrastination are indirect factors that can also influence the behavioral attitude of a person for accepting and using online services. The second aim of the thesis is also fulfilled as it has been proved that utilitarian online services are more effortful to use compared to the hedonic online services. The third aim is also fulfilled by developing a measure containing different questions that can be helpful for determining self-control, procrastination, perceived enjoyment, perceived ease of use and perceived usefulness for these two types of IT use. The scale is highly reliable for both types of online services.

Chapter 9

9.0 Practical Implications

The results of this thesis can be helpful for service developers while designing online services. According to Heijden (2004), “if people reject a utilitarian system, system developers may want to add hedonic features to invoke the other configuration to achieve user acceptance” (p.701). Anssi et al. (2017) in their conference paper also suggested that online service developers should consider the “timing and context” of the customers to provide them with any information. Thus, thesis findings can be helpful for the online service developers because as utilitarian IT use is effortful then they can put some hedonic features into the service to make it more enjoyable for the user and also to decide when to provide them with information because self-control depletes throughout the day or week with effortful activities. The scale developed in this thesis can also be used to determine the factors that might influence the acceptance and use of a new technology or a plan to introduce a new online service.

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Appendix A. Survey Questionnaire

"How taxing is it to use online services? Evidence from the use of Different Available Online Services from Users' Perspective."

Dear Participants! This survey is a part of my master's thesis in Information Systems entitled as "How taxing it is to use online services? Evidence from the use of Different Available Online Services from Users' Perspective". The main objective of this thesis is to find out whether utilitarian IT use is more effortful compared to the hedonic IT use.

Your responses are very important and will be required to carry out the main analysis of this thesis. Answering this survey may take approximately 15-20 minutes. Your information will be handled confidentially and following all the ethical rules by Åbo Akademi University.

If you have any queries or need assistance for answering the questions, please contact: Gazi Esha Islam, Email: gislam@abo.fi or Professor Anssi Öörni, Email: aoorni@abo.fi

Thank you very much for your time and responses. Sincerely,
Gazi Esha Islam.

* Required

General Aspects of the User:

1. What is your Education Level? *

Check all that apply.

- [ ] Primary
- [ ] High School
- [ ] Vocational Training
- [ ] College
- [ ] University/Professional Education

2. What is your Gender? *

Check all that apply.

- [ ] Male
- [ ] Female
- [ ] Others

3. What is your Age (in years)? *

Check all that apply.

- [ ] 0 - 18
- [ ] 18 – 35
- [ ] 36 – 55
- [ ] More than 55

4. Do you use online services? *

Check all that apply.

- [ ] Yes
- [ ] No

5. How frequently do you use online services? *

Check all that apply.

- [ ] Very Frequently
- [ ] Frequently
- [ ] Occasionally
- [ ] Rarely
- [ ] Very Rarely
- [ ] Never

Behavioral Aspects of the User:

6. Do you prefer completing tasks (academic or official) on time? *

Check all that apply.

- [ ] Almost always
- [ ] Often
- [ ] Sometimes
- [ ] Seldom
- [ ] Never

7. Do your leisure activities interfere with your tasks (academic or official)? *

Check all that apply.

- [ ] Almost always
- [ ] Often
- [ ] Sometimes
- [ ] Seldom
- [ ] Never

8. Do your emotional distractions hamper your task performance? *

Check all that apply.

- [ ] Almost always
- [ ] Often
- [ ] Sometimes
- [ ] Seldom
- [ ] Never

9. Do you have any psychological issues e.g. panic and other anxiety disorders, antisocial personality disorder, depression, aggression, and/or anger management problems)? *

Check all that apply.

- [ ] To a Great Extent
- [ ] Somewhat
- [ ] Very Little
- [ ] Not at All

User´s Perception about using the Online Services:

Please answer the following questions based on your use of online services in a scale of 1 to 7 where 1 =Strongly Agree, 2=Agree, 3 = Somewhat Agree, 4= Neutral, 5= Somewhat Disagree, 6 = Disagree and 7 = Strongly Disagree.

10. I feel tired and exhausted while or after using the following online services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

11. I often delay the following online services for later use. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

12. I feel comfortable using the following online services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

13. I enjoy using the following online services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

14. I feel excited about using the following online services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

15. I feel the following online services are useful for me. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

16. I feel stressed while or after using the following online services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

17. I feel energized while or after using the following services. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

18. I feel that using the following online services requires a lot of mental effort. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

19. The interaction with the following online services is clear and understandable. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

20. I feel that the following online services are easy to use. *

Mark only one oval per row.

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

Please rate the following online services according to your preference from scale 1 to 7.

21. Do you think the following online services are enjoyable or disgusting to use? *

Mark only one oval per row.

	Extremely Enjoyable	Enjoyable	Somewhat Enjoyable	Neutral	Somewhat Disgusting	Disgusting	Extremely Disgusting
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

22. Do you think the following online services are exciting or dull to use? *

Mark only one oval per row.

	Extremely Exciting	Exciting	Somewhat Exciting	Neutral	Somewhat Dull	Dull	Extremely Dull
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

23. Do you think the following online services are pleasant or unpleasant to use? *

Mark only one oval per row.

	Extremely Pleasant	Pleasant	Somewhat Pleasant	Neutral	Somewhat Unpleasant	Unpleasant	Extremely Unpleasant
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							

24. Do you think the following online services are interesting or boring to use? *

Mark only one oval per row.

	Extremely Interesting	Interesting	Somewhat Interesting	Neutral	Somewhat Boring	Boring	Extremely Boring
Social Networking							
Online Shopping							
Audio and Video Streaming (movies, music etc.)							
Online Games							
Online Photo Editing							
Blogs							
Online learning or training courses							
Online Communication Services used in work (email, online conferencing etc.)							
Job searching sites							
Real Time Online Information Services (transportation timetables and route planning, news services, traffic reports, Google Maps, weather, dictionaries and encyclopedias etc.)							
E-Government Services (e.g. online tax returns, e-voting, health services, utility bill payment etc.)							
Online banks and insurance services							