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Technology acceptance of IKEA mobile application

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Abstract

In the past few years, rapid development of mobile technologies has been changing the way people approach purchasing. Using Technology Acceptance Model (Davis, 1986), the authors believe that IKEA's furniture mobile application creates a certain value to its users. The study aims at examining the importance of perceived usefulness, perceived ease of use and compatibility dimensions of IKEA's app and their impact on consumers' behavioral intentions to see whether or not they lead to actual purchase.

The thesis findings reveal that IKEA mobile application is not widely used. The results should have been applicable for similar companies as IKEA especially those which promote in-store app usage. However, it is not possible since the thesis contradicts the assumption of broad usage of such mobile application.

The analysis of the surveys revealed gender having a role in IKEA mobile app perception as well as occupation. The analysis is also contributing by a realization that mobile technologies lead to faster decision-making, more information availability, and therefore, can create better marketing communication strategies.

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Introduction

The technology is part of our every-day life today. For example, in Islam, Low and Haasan (2013) study is pointed out that accepting and using modern technologies is common and people are willing to use more and more advanced technology in their daily lives. Not only are these changes seen in communication technologies but also people's needs change because of the usage of more advanced technologies (Alpert and Muscarella, 2007). Mobile phone services have evolved into diverse social phenomenon globally, while the mobile applications and their level of acceptance rather differ from country to country and market to market (Islam, Low and Hasan, 2013).

It is not only about technologies in general, but mobile technologies and their applications are moreover being used by companies in business activities. As well as in their marketing communication approach (Balasubramanian, Peterson and Arvenpaa 2012, Yang, 2005, Leung and Antypas, 2001.) Mobile commerce or by many referred to as m-commerce, is becoming very important in business strategies since the boom of mobile phones (Hung, Ku and Chang, 2003). But because mobile applications are part of the smartphone experience, the number of smartphone users is growing. The number of mobile apps being developed also rises, to serve an even wider range of consumer needs (Kima, Yoonb and Han, 2014). This is why there is a potential for new marketing communication strategy. There is a new window of opportunities beyond the traditional usage of mobile phone in marketing communication. Although, mobile applications are well known, they have not captured much academic attention in marketing communication literature (Kima et al, 2014). However, at the beginning of the emergence of the m-commerce, many businesses argued or doubted the return on investment potential. Nevertheless, with the mobile technology development it could be argued that investing in mobile technologies applications can, on the contrary, boost the sales and ROI of an organization (Yang, 2005). As Balasubramanian et al (2012) state in their study there is a big pressure on being the first to come up with a new technology, which can even induce the business failure because of focusing on the technology rather than on their customers.

According to Stone (2012), the smartphone adoption tipping point was reached in 2010. Smartphone owners are able to access more data or information, or download applications. In a comparison to the traditional mobile phone users, smartphone users have more media content access (Stone, 2012, Westlund, 2010). Considering the previous studies on the smartphones use it could be stated that there is an interesting change in the consumers' behavior. Mobile users also find it convenient to use their phones from wherever they are, including in-store mobile applications giving them a chance to use the app while, for example, standing in front of their product (Stone, 2012, Westlund, 2010).

IKEA was founded in 1943 by Ingvar Kamprad. Originally he sold accessories like pens, wallets and picture frames but soon expanded to satisfy the various needs of customers. Since then IKEA has gone the long way and today operates in 46 countries with over 300 stores and over 130 000 employees. In addition to geographical expansion, the scope of the inventory has changed. IKEA has become one of the leading home equipment suppliers. Their vision nowadays is "To create a better everyday life for the many people" while their mission is: "To offer a wide range of well designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them." IKEA has been following the dominant doctrine of the 20th century, modernism. The motto of the modernism was "New is beautiful" and it emphasized that material things are just a temporary tools which have to be replaced with new, better ones. This is the doctrine on which IKEA has built its empire. By keeping the close relations to their customers and constantly innovating; constantly offering something new and trendy, in order to stimulate the demand.

1.1 Problem

Mobile technologies incorporate more functions today than just the traditional ones, like calling, SMS or MMS. Smartphone users use their phones for many other purposes: for example, to obtain information on products or GPS apps to help them find a location tracking or optionally, to help users locate certain stores and places to eat, etc. Little attention has been dedicated to exploring mobile applications as a link in marketing communication for the companies. Very few studies have been made on mobile app usage among smart phone

owners and its connection to the businesses (Kima et al., 2014). However, it was only a matter of time for companies to adjust their marketing communication strategies mainly because customers expect to have interaction and relationships with companies (Balasubramanian et. al, 2012, Stone, 2012).

The authors of the thesis have been studying in Jönköping, Sweden. It is an industrial area with clusters of many different businesses. As many students come and study there, sooner or later they visit IKEA. Either to buy necessary furniture for their accommodation, or just because it is right there. The authors also visited IKEA and got to know more than what is obvious. The innovation of the IKEA mobile application made them curious to have a closer look on how it is helping IKEA with their sales. However, at the beginning of this trend many companies doubted investing in such technologies, on the contrary, Yang (2005) proved it to lead to boost of sales. Furthermore, the ideal marketing communication strategy is to have an app developed among mobile websites to keep the integration with customer ongoing (Stone, 2012).

During the last few years IKEA has been increasing their efforts towards the mobile technologies. They specifically focused on the informative apps (catalogue and store app) in order to educate their customers about their own needs. It is evident that solving this problem contributes to the greater customer satisfaction and less problems with refunds because of the research results conclusion of about 14% of people buy wrong-sized furniture (Stinson, 2013). IKEA has been working on improvements of their apps by researching the previous usage and updating the app for the next catalogue launch (Washington Post, 2014).

The research conduction in IT domain usually uses the Technology Acceptance Model (TAM), originally developed by Davis (1986). The original model was focusing on user acceptance of information systems and evaluation of the proposed systems prior to their implementation. It is often used in modified versions to improve predictions in system use (Wu & Wang, 2005). This thesis uses the Technology Acceptance Model modified by Wu and Wang (2005). Although, without two of their added constructs, cost and risk. The IKEA mobile app is downloaded for free – meaning no cost construct applicability. The model's construct, risk, is dealing with payment risk and not receiving the product, legal issues and fraud – meaning not applicable for IKEA mobile app case study (no purchasing or transaction operations options through the IKEA app).

This thesis is connecting mobile app technology and consumer behavior on a case study of IKEA and their mobile app usage. There is an opportunity investigating whether IKEA mobile application impacts the actual purchase of IKEA's products tested on the modified TAM.

There will be some theoretical contribution added to the technology acceptance modified version of the model. Furthermore, depending on if there is a need for similar investigation for different type of business but with the mobile application with similar functions, the modified version used by the authors could be of importance for the future.

1.2 Purpose

The purpose will be rather evaluative. It will aim at how users perceive the IKEA mobile application. The results investigate the relationship between IKEA's mobile application and behavioral intention of the users. It is important that it will be done through user's perceived usefulness of the IKEA app, user's perceived ease of use of IKEA app and compatibility of IKEA app. The obtained information will help the authors to identify the impact of the perception on the behavior intention to use the IKEA app. Identifying the behavioral intention, the authors will be able to arrive at the conclusion whether the IKEA mobile app helps with the actual purchase of IKEA products. The thesis will be disclosed to IKEA. Thanks to the connections with IKEA and a correct way of investigation it will be possible to reveal the results to IKEA and to serve them with valuable information.

1.3 Research Questions

The purpose of the research is focused on the following research questions:

- What is the importance of perceived usefulness, perceived ease of use, and compatibility for the IKEA interactive mobile application?
- What is the relationship between the IKEA's mobile application and consumers' behavioral intentions? Are the consumers' behavioral intentions for the IKEA' mobile application leading to actual purchase of IKEA products?

1.4 Thesis definitions

To connect the phenomena of technologies, it is important to understand the parts of the model used in the thesis. The main focus will be on the Technology Acceptance Model (TAM), modified by Wu and Wang (2005). TAM takes its theoretical basis from the Theory of Reasoned Action (TRA) in which beliefs influence attitudes and the attitudes lead to intention that generate behaviors. TAM modified this belief-attitude-intention-behavior relationship, in order to model the acceptance of Information Systems / Information Technologies (Saricam, 2014).

Therefore, the following table summarises all of the leaning theories in once.

Table 1 Definitions explaining elements of the proposed TAM

<i>Perceived Usefulness</i>	the prospective user's subjective probability of using a specific application system that will increase his or her job performance <i>Usefulness determines the individual's perception of behavior to gain specific reward(s).</i>	Davis et al. (1989); Islam et al. (2013); Davis (1989) <i>Islam et al. (2013)</i>
<i>Perceived ease of use</i>	the degree to which the prospective user expects the target system to be easy or effortless	Kuo and Lee (2009); Lim (2009); Venkatesh (2000)
<i>Compatibility</i>	the degree to which using an innovation is perceived as consistent with the existing sociocultural values and beliefs, past and present experiences, and needs of potential adopters <i>the degree to which innovation is aligned with the potential adopter's existing values, previous experience and current needs</i>	Rogers (1962); Tornatzky and Klein (1982) <i>Rogers (1983)</i>
<i>Behavior Intention</i>	intention to use an information technology <i>the factor that determines the usage of technology</i>	Yang Kenneth (2005) <i>Saricam (2014)</i>
<i>Actual purchase</i>	<i>The action of purchasing that is influenced by the positive behavior intention towards the information technology</i>	<i>Proposed definition</i>

<i>Mobile application</i>	are software programs that may be installed on smartphones and a growing selection of other devices (tablets, some digital set-top boxes, laptops, desktop computers). Mobile applications are not limited to mobile devices only—they are available, and can be used, with both fixed-line and mobile services.	Australian Communications and Media Authority (2011)
<i>Theory of reasoned action</i>	Theory states that the behavior is determined by behavioral intention which is predicted by people's attitude toward that behavior	Fishbein and Ajzen (1975)
<i>Technology acceptance</i>	an individual's psychological state with his or her voluntary use of a technology	Gattiker (1990); Islam et al. (2013)

2 Theoretical framework

This section of the thesis will explain motivation behind the choice of the specific theory. It will also describe IKEA mobile application, IKEA and its engagement with mobile applications as the relevance of this section to the thesis problem and purpose. For better understanding of the theory and definitions, the section is divided into more comprehensible sub-headings.

2.1 IKEA

During the globalization in the late 20th century, not many retailers have successfully expanded as IKEA did. And even though, some other brands have been slowing down, Swedish company has been continuously expanding all over the globe.

One of IKEA's biggest advantages was that it was actually meant to be an international company from the very beginning. The vision of Ingvar Kamprad was to offer fashionable furniture available to everyone. In order to keep the price low, it was necessary to leverage the economies of scale, but also to create a cutting edge cost saving procedures (Lu, 2015). What has started as an usage of daylight to save electricity, has evolved towards the most advanced packaging system in the world. IKEA has mastered the retailing: selling high volumes of inventory at a consistently low price in vastly different marketplaces, languages and cultures.

Yet it does not show any intention to slow down. By expanding to emerging markets like China and India, it has been experiencing a steady growth and plans to reach €50 billion in sales by 2020 (from 28.7 in 2014); with a projected number of 500 stores – compared to the existing 318 (Nydailynews.com, 2015).

In order to reach this ambitious goal, the company has to continuously innovate through all of its value chain: from the initial stages when the raw materials like wood and cotton are being collected, until the moment a new product has been delivered and installed in customers' home.

IKEA has been working hard in order to stay aligned with the trends. It has been among the most innovative companies regarding the mobile technologies launching the store app and catalogue app in 2011 and using interactive technologies like augmented reality since 2013. Its newest addition is a launch of the furniture which offers wireless charging of the mobile devices (Mearian, 2015).

2.2 Advanced Mobile Phone Services (AMPS)

To connect the research main interest, IKEA mobile application, with the mobile technologies, it is necessary to remind what the advanced mobile phone services are. Initially, mobile services were based almost entirely on voice communication. However, new forms of mobile services have become available via other functions, such as text messaging, internet access, digital imaging, banking, and financial instrument trading and shopping. Mobile phones are currently used by most people for communication as well as for business and trade activities. Mobile communicating devices are increasing in numbers and therefore are adopting many capabilities and functions for services because these devices are more affordable and easily available (Islam, Low and Haasan, 2013). Advanced mobile phone services (AMPS), such as communication services (e.g. short text messages, multimedia messages, e-mails, mobile chatting), information content services (e.g. news headlines, location-based information), transaction services (e.g. booking cinema tickets and performing financial transactions) and entertainment services (e.g. mobile gaming, horoscopes, ring tones) (Stafford and Gillenson, 2003) are now used in for instance, mobile banking, management information networks or systems, advertising, etc.

2.3 M-commerce

Mobile technology, also known as m-commerce, has made it possible for services to become the most wide-reaching interactive technology in the world (Islam et al, 2013). Islam et al. (2013) state that this technological system has played an important role in supporting the daily activities of trade and commerce and m-commerce also provides many advantages and benefits when using mobile phones as an info-communication and negotiation tool. This includes the abilities to save time and reduce costs by cutting travelling time, collecting data and information efficiently and disseminating them widely (Low & Ang, 2011).

Because mobile phone services have evolved differently and the world consists of different countries and cultures, the acceptance of such technology differs from country to country and market to market (Islam et al, 2013). This is why it is significant to understand the acceptance of technologies because many mobile applications are rapidly and widely developed for mobile commerce. The acceptance and usage of mobile commerce means that the consumers embrace the technology innovations (Wu & Wang, 2005).

The reason why m-commerce is a part of the frame of references is to explain the trend and its capability it gives to any users of mobile applications and its usefulness for merchants. Merchants can appeal to their customers in two different ways now. First way, by creating

specialized apps (like IKEA app) that run independently on a smartphone or tablet and can display all or some of the marketer's merchandise as well as support a shopping basket. Second way, by creating a completely different version of the e-commerce website that has been adjusted and optimized for the smartphone interface (Schell, 2011). Adobe systems found out, in their survey, that two-thirds of shoppers who used their phones preferred shopping via a mobile-optimized website compared to using an "app" (Schell, 2011). However, the investigated IKEA mobile app is an app that needs a support of the internet which IKEA stores offer for free. Therefore, IKEA app belongs to the second approach by the merchants.

2.3.1 Mobile applications

Rahul and Jürgen (2012) point out what recent research show about smartphone users. Over half of all Northern Americans smartphone users have used their phones for a purchase. Many leading retailers are therefore changing the experience for customers from in-store to more out-store engagement to mobile devices. Andersen (2010) claims that by 2014 over fifty percent of the United State shoppers will use their mobile phone that will to some point affect their purchasing decisions.

Mobile applications (commonly known as apps and applications) are software programs that may be installed on smartphones and a growing selection of other devices (tablets, some digital set-top boxes, laptops, desktop computers). Mobile applications are not limited to mobile devices only—they are available, and can be used, with both fixed-line and mobile services (Australian Communications and Media Authority, 2011).

Mobile applications case serve different purposes. They can be informative, educational, entertaining, helpful in many areas, able to capture different achievements (for example, running) and etc.

However, as Begany (2014) points out, mobile apps have become subjects of governmental legislation in order to control the privacy of the citizens from advertising networks and analytics firms, so developers have to have this in mind for the future.

2.3.2 IKEA mobile app

Applications are used individually by their users in the app stores on users' mobile devices. Each user has either a particular need or a reason to download and use the app. Users are fragmented but they still share information about apps through networked information systems (view Mobile application reviews part) (Kima et al, 2014). The users' intention to download the app is usually influenced by the cost of the app which leads to one of the strong advantages of the IKEA app. The users can download it for free.

IKEA has been introducing its app to satisfy the growing needs of enhancing the in-store shopping experience. The app has been introduced gradually for local markets around the world. For example, in Canada it was introduced in 2012 and optimized for both of their official languages (English and French).

However, on the contrary of many mobile apps that serve as an extension of the online store (meaning one can purchase through the app), IKEA's app is actually an informative tool. It is automatically linked to the nearest store and allows the user to browse through the stock, create shopping lists and obtain detailed information but also to navigate through the store.



Shop smart from the start.

Make shopping easier by knowing what's on sale, in stock and where to find it.

Download the new IKEA App now



http://www.ikea.com/ms/en_CA/mobile/mobile_splash.html

2.3.3 Mobile application evaluation

User reviews, in general, refer to first-hand opinions provided in written form on the app store. Users can therefore, obtain information about the quality of product or app and personal experiences with the product or app (Benlian, Titah and Hess, 2012).

Little research has been conducted on user reviews about mobile apps. However, the positive role of consumer reviews in the context of Internet-based electronic commerce has been investigated in a number of studies (Kima et al, 2014). Consumers that review the product or in this case IKEA mobile app in the app store consider it to be very helpful in performing their choice (Pan & Zhang, 2011) and trust better in consumer generated reviews rather than the ones conducted by the app providers themselves (Benlian, Titah and Hess, 2012). These kind of positive perceptions have a tendency to enhance the purchase intention about the product or choice (Gupta and Harris, 2009; Park, Lee and Han, 2007). Kima et al. (2014) state that the potential of the reviews by app users as another factor affecting behavioral intention is theoretically explained by theory of reasoned action (TRA). Kima et al. (2014) also support that many studies have found that favorable consumer reviews even lead to actual purchase (Chevalier and Mayzlin 2006; Duan, Gu, and Whinston 2008; Zhu and Zhang 2010), however, in this thesis the favorable app reviews would lead to actual download of the IKEA mobile app, as well as they could lead to the opposite.

2.3.3.1 *Theory of reasoned action*

This theory was originally developed by Fishbein and Ajzen (1975). Davis (1986) derived his original Technology acceptance model from this theory (Wu & Wang, 2005). The model used by this thesis is modified by Wu and Wang (2005). In their paper, the theory of reasoned action is a predictor of human behavior in any domain. This behavioral intention is predicted by people's attitude toward that behavior. Meaning also that the behavior intention of the users towards the IKEA mobile application could be also explained by the theory of reasoned action.

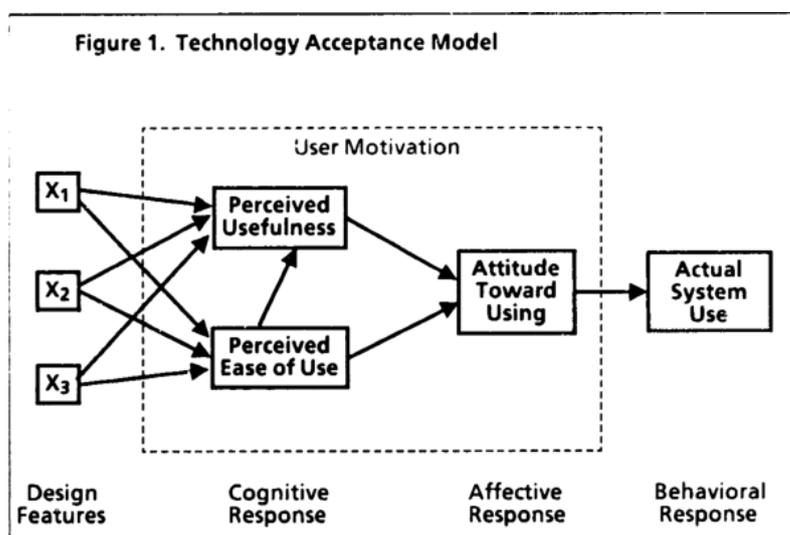
2.4 Original Technology acceptance model

Technology acceptance model (TAM) has been widely used in IT domain to research different trends in a connection to technology and its effect on users. Different studies has been conducted using TAM in different forms. Some studies use the original model, but most of them modify it to better meet their purposes (Wu & Wang, 2005). TAM therefore, can be used also in extended versions.

Examples of previous research using the technology acceptance model as an explanation for different phenomena: investigating the *online consumer behavior* (Koufaris, 2002), *physician acceptance of telemedicine technology* (Hu, Chau, Sheng and Tam, 1999), *user acceptance of information technology* (Davis, 1989), *integrating control, intrinsic motivation, and emotion into the technology acceptance model* (Venkatesh, 2000), *acceptance of apparel private sale sites by consumers* (Saricam, 2014), *intention to use advanced mobile phone services (AMPS)* (Islam, Low and Haasan, 2013), *mobile messaging services acceptance* (Mafe, Blas and Tavera-Mesa, 2010), *the usage of 3G mobile services* (Liao, Tsou and Huang, 2007; Kuo & Yen, 2009), *advanced mobile services acceptance* (Lopez-Nicolas, Molina-Castillo and Bouwman, 2008), *behavioral intention to use mobile banking* (Luarn & Lin, 2005), *mobile SMS advertising* (Zhang & Mao, 2008), *purchase intention on mobile shopping websites* (Lu & Su, 2009), *acceptance of email and graphics, voice mail and word processors, processors, spreadsheets, DBMS* (Gefen & Straub, 1997), *group support systems* (Chin & Gopal, 1995), *mobile app usage among smart phone users* (Kima, Yoonb and Han, 2014), etc.

The original technology acceptance model or TAM was developed by Davis (1986) it is shown in the [Figure 1. Original Technology acceptance model.](#)

Figure 1. Technology acceptance model



Source: Davis (1986)

The original model had two objectives. First one was to improve the understanding of user acceptance processes and providing new theoretical insights into successful design and implementation of information systems. Second one was the purpose of providing the theoretical basis for the practical user acceptance testing methodology that would enable system designers and implementers to evaluate proposed new systems prior to their implementation (p. 7, Davis, 1986).

Davis's (1986) research focused on the class of systems as end-users specifically as the end-users represented increasingly important class of information systems at the time and as the systems are directly used by organizational members to support their work activities (p. 9)

The original TAM explained the links between the users' attitudes, computer adoption behavior, belief and intention (Sajza, 1996). As it was already mentioned before, many previous research has been based on this model, however in many cases in a modified version.

In 1989, Davis et al (1989) claimed TAM to be a powerful tool for explanation and prediction of the user's behavior based on three theoretical components, being intention, perceived usefulness and perceived ease of use. However, Kima et al. (2014) point out the weaknesses of TAM including the inability to explain other possible factors besides usefulness and ease of use (Mathieson 1991; Moon and Kim 2001; Venkatesh 2000).

Davis and Venkatesh (1996) critically assessed potential measurement biases the technology acceptance model could create considering psychometric properties of previous studies. However, their results prove that putting these multiple constructs to measure one single result is not an artifact. This is why TAM is believed to be the most suitable tool for investigation of IKEA mobile app.

Islam, Low and Hasan (2013) state in their study that: "In accepting a new technology, there are several literal constructs that emphasize the technology acceptance model (TAM), which plays an important role in decision-making. Davis et al. (1989) develop TAM as an adaptation of the theory of reasoned action (TRA) and propose TAM to emphasize the two beliefs: *perceived usefulness* (PU) (referred in 1.4 Thesis Definition), defined as the prospective user's subjective probability of using a specific application system that will increase his or her job performance; and *perceived ease of use* (PEOU), defined as the degree to which the prospective user expects the target system to be easy or effortless (Kuo and Lee, 2009; Lim, 2009)" (2013: 827). These constructs were tested to be relevant in almost any technology acceptance research. Moreover, to explain the definition of the *technology acceptance*, Gattiker (1990) explains

it as an individual's psychological state with his or her voluntary use of a technology (Islam et al., 2013).

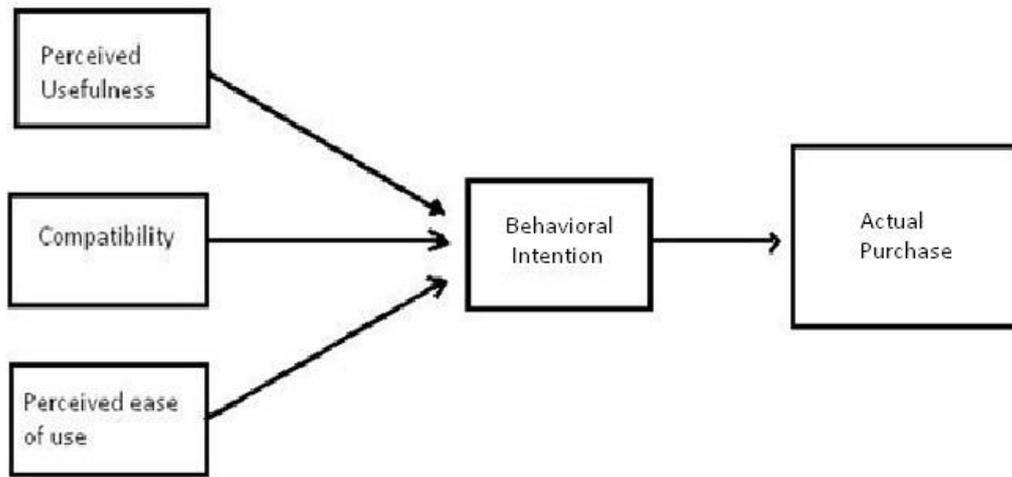
Finally Wang, Chiang and Ming – Te, (2011) concluded that attempts to adopt mobile communication systems, one has to take into consideration that they are influenced by the attitudes of users towards the systems. These attitudes are affected by whether or not the mobile technology products are perceived as being simple and easy to operate and to fit into users' everyday lives.

2.5 Technology acceptance model

For the purpose of the thesis, of the thesis the authors are using technology acceptance model modified by Wu and Wang (2005). Figure 2 Technology acceptance model displays the Technology acceptance model modified without using cost and risk theoretical constructs. The original Technology Acceptance Model is focusing on computer system usage acceptance for managers. It also aims at explaining the users' attitudes which are not a priority in this study. Sajza (1996) also excluded attitude as a theoretical part of the model since it has done well in predicting the intention. Practitioners would find it useful where the intention is of importance, like for example, in the evaluation and choice of software packages. Davis has finished his original technology acceptance model in 1986, however in 1989 he has done a research proving the reliability of the model. Venkatesh (2000) explains why Davis (1989) excludes attitude towards using a technology in his final model. It is because of the impact of beliefs on intention by attitude, and a strong direct link between perceived usefulness and intention. Nevertheless, the thesis is not focusing on the research of consumers' attitude towards the application rather it is assumed that consumers already have positive attitude.

In modified version, technology acceptance model is able to provide better understanding of the acceptance of IKEA mobile app, leading to the actual purchase of products.

Figure 2. Technology acceptance model



Source: Wu and wang (2005)

For the same reason, the authors had to use the model in [Figure 2 Technology acceptance model](#). For example, Wu and Wang (2005) extended their model by cost and risk dimensions. However, the authors could not use their adjustment of the model because the IKEA app does not include any cost and could be downloaded from the app stores for free (described in the IKEA mobile app section). Moreover, there is no risk regarding payment as Wu and Wang (2005) are using because the app does not have any purchasing function yet. Another study that had components close to what the proposed model was conducted by Islam, Low and Haasan (2013). Their model included perceived usefulness, perceived ease of use, compatibility, complexity, attitude toward use and intention to use advanced mobile phone services. However, because this thesis is aiming at investigating how IKEA's consumers perceive the app and their behavior intention with it and whether or not it is influencing their actual purchase decisions, this model could also not be applied.

Moreover, Islam et al. (2013) as well as the other researchers use the attitude toward using. Obviously, the technology acceptance model is missing this component. Davis (1986) (p. 25, 26) in the original model, refers to the *attitude* as the degree of evaluative effect that an individual associates with using the target system in his or her job. Therefore, the attitude definition corresponds with the definition of the behavioral criterion. This explains that the attitude is included in the behavior intention construct, it is not a single construct. Moreover, it is assumed that IKEA app users already possess certain level of attitude enough to download the app and work with it.

The following section will explain the used theoretical constructs of the technology acceptance model - modified version.

2.5.1 Perceived usefulness

Davis (1986) was concerned with estimating the effects of perceived usefulness and perceived ease of use accurately. This is why he proved them to provide more appropriate results by estimating these two constructs separately. Although, he found that perceived usefulness is casually affected by perceived ease of use. Wu and Wang (2005) stress the perceived usefulness and perceived ease of use directly influence attitude toward using through behavior intention. Davis (1986) also describes attitude toward using a given system being a significant determinant whether or not the potential user actually uses it. Davis (1986) describes attitude toward using as being a function of perceived usefulness and perceived ease of use.

However, in this study “perceived usefulness is reconsidered to reflect individual needs of mobile app users and of the various functions of the app. Other potential motivations for using technology have been often derived through the application uses and the media usage to gratify users’ specific needs (Katz, Haas, and Gurevitch 1973)” (cited in Kima et al., 2014: 3).

Referred to the IKEA mobile app description (2.3.3) IKEA app is a source of information about products for IKEA customers. Information was viewed as a motive related to usefulness Kima et al. (2014). To be more specific, information as a motive is important and is influencing the attitude and behavior intention Kima et al. (2014). It will help identify the usefulness of the IKEA mobile app in terms of information usefulness from the users’ perspective. Referring to the Thesis definition part (1.4), the perceived usefulness is the prospective user’s subjective probability of using a specific application system that will increase his or her job performance (Davis et al.,1989; Islam et al., 2013; Davis, 1989) and that usefulness determines the individual’s perception of behavior to gain specific reward(s) (Islam et al., 2013). These definitions, in terms of specific IKEA mobile app would be explained as follows: *perceived usefulness* – IKEA mobile app user’s subjective probability of using IKEA mobile app that will increase his or her shopping experience; usefulness of IKEA mobile app determines the user’s perception of behavior that leads to actual purchase.

2.5.2 Perceived ease of use

“Perceived ease of use is to have a significant direct effect on perceived usefulness, since, all else being equal, a system which is easier to use will result in increased job performance (i.e., greater usefulness) for the user.” (cited in Davis, 1986: 26). Perceived ease of use can strengthen perceived usefulness as Davis (1989) and Davis et al. (1989) found in their study. To understand the determinants of perceived ease of use is further underlined with two mechanism by which it influences intention. According to Davis et al. (1989) and Venkatesh (2000) firstly, perceived ease of use has a direct effect on intention and an indirect effect on intention via perceived usefulness. Secondly, it is an initial hurdle that users have to overcome for acceptance, adoption and usage of a system. However, Wu and Wang (2005) observed that perceived ease of use influences behavioral intention to use indirectly and that it indirectly influences intention to use through perceived usefulness. Moreover, Islam et al. (2013) argue that perceived ease of use is not important to understand user intention to adopt a particular system, which contradicts to previous studies of Mafe, Blas and Tavera-Mesi (2010). This points out that the results change depending on the research context and other factors.

Referring to the Thesis Definitions (1.4), perceived ease of use is the degree to which the prospective user expects the target system to be easy or effortless (Kuo and Lee, 2009; Lim, 2009; Venkatesh, 2000). Placing this definition for IKEA mobile app for enhanced comprehension, it would sound as follows: Perceived ease of use is the degree to which IKEA mobile app user expects IKEA mobile app to be ease or effortless.

2.5.3 Compatibility

Tornatzky and Klein (1982) elaborated on the existence of two types of compatibility: normative or cognitive compatibility referring to compatibility with what people feel or think about an innovation, and practical or operational compatibility, referring to compatibility with what people do. They elaborated on the definition defined by Rogers (1962), indicating compatibility as the degree to which using an innovation is perceived as consistent with the existing sociocultural values and beliefs, past and present experiences, and needs of potential adopters (Karahanna, Argwal and Angst, 2006, p. 126-127). Rogers' (1962) definition of compatibility is widely accepted and used. In the study conducted by Wu and Wang (2005), compatibility has the most significant influence on behavioral intention and on the actual use. The results of the study by Islam et al. (2013) also indicate that compatibility and perceived usefulness are the key factors for using advanced mobile phone services.

Rogers' (1962) definition was utilized by Moore and Benbasat (1991) as the starting point for their instrument development process. The latter compatibility definition relating to the Thesis Definition part (1.4), is compatibility with the needs of potential adopters, taps an aspect of relative advantage since an innovation cannot be viewed as advantageous if it does not meet users' needs (Moore & Benbasat 1991). Putting compatibility to the IKEA mobile app context the definitions could be understood as follows:

Compatibility is the degree to which using IKEA mobile app is perceived as consistent with the existing sociocultural values and beliefs, past and present experiences and needs of potential users of IKEA app; the degree to which IKEA mobile app is aligned with the potential user's existing values, previous experience and current needs.

This is the reason why compatibility is a theoretical construct. It will help identify whether IKEA mobile app meets its users' needs. The values of every user differ, so it will be possible to have an insight on how is the IKEA mobile app compatible with people. Furthermore, if the compatibility of the mobile app suits the way consumers would like to interact with IKEA and whether it has met their shopping needs it could be argued later on that the app is a potential sub-dimension of relative advantage for IKEA or perceived usefulness of IKEA mobile app.

2.5.4 Behavioral Intention

There are many definitions describing intention or behavioral intention. For example, in the study done on advanced mobile phone services, Islam et al. (2013) used a definition previously used by Ajzen, (1991) and Mafe et al. (2010) - "intention is assumed to capture the motivational factors that influence behavior; they are indicators of how hard people are willing to try, of how much of an effort they are planning to exert, in order to engage in a behavior" (2013: 826). Their research supports that previous studies discovered behavioral intention to be the major factor of individual usage and that intention to use mobile services are reasonable indicator of future system use (Ajzen, 1991; Davis et al., 1989; Yi et al., 2006; Liao et al., 2007; Kuo and Yen, 2009; Mafe et al. 2010). On the other hand, Saricam (2014) explains the behavioral intention as the factor that predicts the usage of technology and is determined by the attitude, indirect and direct influence of perceived usefulness and perceived ease of use. Looking at it from the cost-effectiveness, which refers to what consumers conclude when evaluating benefits against costs, it directly influences behavioral intention (Pagani, 2004). Moreover, Wang and Lie (2006) point out how important it is to actually

understand what in particular influences consumers' intention to use mobile banking services.

Nevertheless, behavioral intention is connected with perceived ease of use and perceived usefulness as the subsequent behavior is linked with it (Venkatesh, 2000).

As it is cited in the research done by Yang Kenneth (2005), the "attitude toward using (AT) is determined by a user's perceived usefulness (PU) and perceived ease of use (PEOU) in information technology use (O'Cass and Ferench, 2003)" (2005: 261). "As TAM is an intention-based model, intention to use an information technology or the behavioral intention (BI) is also included in the model and is theorized as a key factor between attitude toward using (AT) and actual system use (AU)." (Venkatesh and Davis, 1996: 454). Venkatesh and Davis, (1996) also found that users' intention have been found to be better predictors of system usage than competing predictors such as realism of expectations (Ginzberg, 1981), motivational force (DeSanctis, 1983), value (Swanson, 1987), user information satisfaction and user involvement (Baroudi, Olson and Ives, 1986), and user satisfaction (Srinivasan, 1985). In the study of Venkatesh and Davis (1996) focusing at the workers and the IT in the workplace, it could be argued that the IKEA mobile app users are knowledgeable in the mobile application technology and therefore, its users hold stronger self-efficacy beliefs. Holding self-efficacy beliefs in this context, means having the knowledge how to use the app which has significant impact on the perceived ease of use.

In order to put the definitions from the table in the Thesis definitions part (1.4) in line with the IKEA mobile applications, *behavioral intention* is the intention to use IKEA mobile application and the behavioral intention is also a factor that determines the usage of IKEA mobile app.

2.5.5 Actual purchase

The final part of the model used was decided to be changed from the actual use to actual purchase. It is assumed that with this construct the authors can investigate the impact of the IKEA mobile application on the sales. Barber, Kuo, Bishop and Goodman (2012) mention intention questions and that it has long been recognized that they are not perfectly correlated with actual purchases (Morwitz, 1997, 2000). Purchase intention has been measured in several ways to explain intention to purchase but intention to purchase might differ from the actual purchase. For example, when customers enter the store having planned what they will buy they have certain purchase intention but the fact is that they often end up purchasing unplanned items (Koufaris, 2002). Using the app inside the store can therefore, lead to such unplanned purchasing which is why the actual purchase construct will answer to this question.

Because this is a case study for IKEA app and because there is no adjusted definition of actual purchase in already conducted studies, the authors are proposing their actual purchase definition. The actual purchase is *the action of purchasing that is influenced by the positive behavior intention towards the information technology* (referring to the Thesis Definitions part, 1.4).

To place this proposed definition for IKEA mobile app it would be used as follows: *The actual purchase* is the action of purchasing that is influenced by the positive behavior intention towards the IKEA mobile application.

2.5.6 Hypotheses

Now that the proposed model was explained, there is a place to introduce the hypotheses the model will cover.

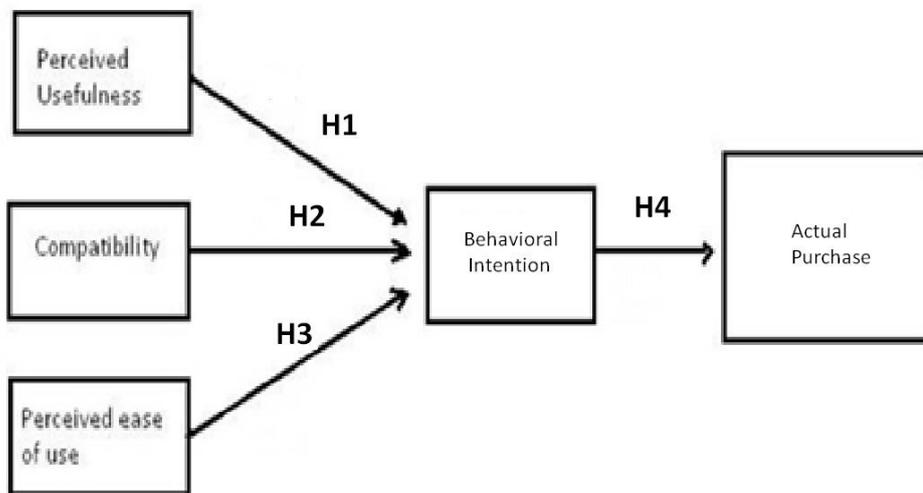
H1: Perceived usefulness has a direct effect on behavioral intention.

H2: Compatibility has a direct effect on behavioral intention.

H3: Perceived ease of use has a direct effect on behavioral intention.

H4: Behavioral intention has a direct effect on actual purchase.

Figure 3 Technology Acceptance Model, hypotheses



Source: Wu and Wang (2005)

Methodology

Prior to the collection of the data, it was important for the authors to understand the underlying research philosophies to select the most suitable technique for the technology acceptance model testing on IKEA mobile application.

Two central doctrines guiding the modern researches are believed to be positivism and interpretivism (Saunders, Lewis & Thornhill, 2006). According to Denscombe (1998), positivists believe that aim of social research is to discover the patterns and regularities of the social world by using the kind of scientific methods used in the natural sciences. Positivistic research strive for observable and measurable data, use of deductive logic and testing the hypotheses through quantitative research.

On the other hand, interpretivists believe that it is important to observe how humans interpret activities and that it can be achieved through methods other than those employed by the positivist's approach. This approach emphasizes methods like interviews and participant observation. (Livesey, 2006)

According to Weber (2004), a good researcher would choose a method that fits their purpose the best. As stated in the thesis purpose, the aim of the research was to explore the effect of model constructs perceived usefulness, perceived ease of use and compatibility on behavioral intention, and the relationship of the behavioral intention on actual purchase. Therefore, this thesis emphasizes positivism since its goal is to discover specific nature of cause and effect relationships.

3.1 Approach

There are two different method-reasoning used in scientific research are deductive and inductive approaches. The deductive approach starts with a theory which is narrowed down to hypotheses which are to be tested. It is regarded as a top-bottom style of approach. With a sample large enough, deductive reasoning is the way to draw generalizations from quantitative data (Saunders, Lewis & Thornhill, 2006). On the contrast, inductive approach is the bottom-top approach where the collected data is used as a base for developing a theory. As Saunders et al (2006) point out, it is important to choose between the deductive and inductive approach as the first one aims at describing what is happening while the second one aims at understanding why is it happening.

This thesis is using deductive approach because of an interest in testing the hypotheses which are to be proved right or wrong in effort to deducting the conclusions about the researched phenomena.

3.1.1 Qualitative vs Quantitative research

There are different methods of data collection used in business administration. These methods fall into two categories: qualitative and quantitative. Qualitative studies deal with non-numerical data of literal statements and descriptions while the purpose of the quantitative research is to collect reliable numerical data to explain a particular phenomenon (Anderson, 2004).

In order to be able to look at the relationships between the variables regarding the opinion of the larger population and draw generalizations out of the results, quantitative research method has been chosen for this thesis.

3.1.2 Explanatory research purpose

In order to best meet the purpose of the thesis, the correlation or the theoretical constructs of the model is necessary. Moreover, to arrive at the conclusion whether of not the IKEA mobile application increases the actual purchase of users, the liner regression will be testing depend variable – actual purchase against independent variables – perceived usefulness, perceived ease of use, compatibility and behavioral intention of the IKEA mobile app.

Saunders, Lewis & Thornhill (2009) point out that there are three different categories of research purpose: exploratory, descriptive and explanatory. None of these three have to be used exclusively in research but can overlap since the boundary between hem are not always

clear (Hussey & Hussey, 1997) The purpose of this thesis would fit the best within explanatory one since it is helping in developing a greater understanding on what is going on regarding a certain phenomenon. Explanatory studies analyze causes and relationships and attempt to identify patterns related to the subject studied. (Saunders et al, 2006).

Both primary data and secondary data are used in a research. Data is categorized based on the source; primary data being collected by researches themselves and secondary data being data already collected for some other purpose (Saunders, et al. 2009). For this study the primary data is collected which is explained in the “Data Collection” section.

3.2 Population and sampling

Sampling is a process of selecting subjects to be a part of the sample for a study. Due to the fact that the whole population of a research question is too big, it is impossible to collect data for the entire population. This makes a process of sampling an unavoidable compromise. (Borg and Gall, 1989)

A sample is a subset of the population made up by randomly selected individuals from the population. The authors have targeted different IKEA customers as the sample of this study. This included individuals from the different countries where IKEA is currently present: Croatia, France, Slovakia and Sweden.

3.3 Data collection

Since relatively few observable phenomena actually occur naturally, it is necessary to use the tools such as questionnaires and collect the data. In this way it is possible to study an incredibly wide range of phenomena which makes quantitative researches very flexible (Muijs, 2004). The data for this thesis was collected through online platform Qualtrics (www.qualtrics.com). The advantage of the electronic data collection is that it makes a direct export of data possible which reduces the amount of work and eliminates manual data entry thus reducing the eventual human error.

3.3.1 Questionnaire

The most popular and practical technique for collecting data in quantitative studies is the questionnaire. Other ways of data collection in quantitative research include observation of well-defined events and experiments (Thietart, 2001).

Sekaran (2003) defines questionnaire as “*pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives.*” There are three elements composing a questionnaire: the questions, the layout and the rating scale (Hill, 1999). Sekaran (2003) also covers a detailed overview of these aspects, arguing that wording of questions should be brief, clear and neutral. Furthermore, that variables should be chosen and classified in order to capture a respondent`s answers and finally that overall layout of a questionnaire should be structured and easy to follow. In addition, when a sample is obtained from different countries it is necessary to use different native languages or alternatively use English. (Sekaran, 2003).

The questionnaire used to collect the data for this thesis is in both English and Swedish. Since many survey participants have Swedish as their first language it was necessary to provide them with a questionnaire they would understand perfectly in order to minimize misunderstandings. A questionnaire can be processed in many different ways: personally administered survey, regular mail, telephone and through various online tools. Since the scope of this research included simultaneous collection of data in different countries, online questionnaire was the best option. Both questionnaires were designed on the Qualtrics platform (www.qualtrics.com) and delivered to participants through e-mail and social media.

In order to collect the data the questionnaire was using sets of questions to explore the main elements of our model. The questions were derived from the previously conducted researches and are based on Five-point Likert scales with end points of “strongly disagree” [1] and “strongly agree” [5]. All of our questions were closed-ended questions which are easier to analyze (Sekaran, 2003).

In addition to the questions regarding the parts of the model, (30 questions in total) introductory part was used to obtain demographics data with the questions about age, gender, nationality and occupation.

The questionnaire is located in Appendix 1.

3.4 Data Analysis

Various software such as SPSS, Excel, Stata or PSPP can be used to assist the process of data analysis. Due to the availability, SPSS was chosen for this thesis.

SPSS stands for Statistical Package for the Social Science. It is one of the most popular statistical packages which can perform highly complex data analysis. It can extract data from wide range of file formats and use them to generate reports, charts, plots, distributions or trends. As its name says, initially it was developed for social sciences but due to its flexibility it has been used for many other fields as well including health sciences and economics.

Several analyses were run through SPSS. After looking at the respondent rate, it is important to understand the respondent profile. This is why the descriptive analysis of the control variables was run. Moreover, the descriptive analysis was used to show the typical user of the IKEA mobile application based on the respondents to the questionnaire. One of the most important tests in this thesis is the correlation analysis. The correlation analysis was done in two steps. Firstly, there was a need to see the theoretical construct correlation among the variables indicating the model construct. This means, for example, if the perceived usefulness had 6 sub-questions, those sub-questions are 6 variables describing the perceived usefulness correlation. All of the model constructs had multiple questions. Secondly, the most significant variables deduced from the first correlation analysis were used to test the correlation between the most significant variables for the study.

Studies with many variables are usually the case for factor analysis. This thesis was no exception either. Factor analysis serves as a tool to detect the most significant variables for the study. However, referring to the 4.4 Factor Analysis part, the explanation why the factor analysis would not play an important role in this study, is the actual IKEA mobile application users' number of the survey respondents is only twenty. Finally, the regression analysis was run to test the hypothesis.

3.5 Reliability and Validity

No research can claim to be perfect since some invalidities can always be argued. However, it is important to strive for stability and consistency of the results derived from the research. According to Yin (1994), reliability is concerned with consistency, accuracy and predictability of specific research findings.

While researching the relationships between the variables it is necessary to be orientated on internal validity (Yin, 1994). Internal validity is used for explanatory studies and has a main focus on problems such as confounding or selection bias. However, demographics attributes as shown in the respondent profile (4.1.2) prove that the selection bias was minimized since the only one (out of four) attributes shows a significant difference in population (age group).

In order to achieve satisfaction in a reliability and a validity of this study, a lot of time has been dedicated on the previous studies, especially those connecting Technology Acceptance Model and mobile applications. For example, studies of *intention to use advanced mobile phone services (AMPS)* (Islam, Low and Haasan, 2013), *advanced mobile services acceptance* (Lopez-Nicolas, Molina-Castillo and Bouwman, 2008), *purchase intention on mobile shopping websites* (Lu & Su, 2009), *mobile app usage among smart phone users* (Kima, Yoonb and Han, 2014) (referring to 2.4 Original Technology acceptance model). Since these studies were also quantitative based it was relatively easy to adapt already tested questionnaire elements.

Furthermore, two pilot tests were done before the launch of the questionnaire. First pilot was sent to two researchers who were asked to comment on the clarity and quality. Second pilot was sent to the bi-lingual researcher (Swedish and English) in order to verify that questionnaire in Swedish is properly translated in order to avoid misunderstandings and therefore less reliable results.

3.6 Delimitation

Researching a certain phenomenon always includes limits that are unable to be overcome. These results should not be overstated either. The precision of the results therefore depends on the quality of the underlying data. Although, every measure was taken into consideration to obtain the best quality data, it was not possible to collect high amount of respondents to make the study more credible. Also, in the market research studies there is always an aspect of psychology connected with the customers being studied. Personal preferences of the respondents, for instance, were not able to be captured. According to (Chih, Wang, Chiang and Ming – Te, 2010) the attempts to adopt to mobile communication systems are affected by the individual attitude of customers towards the systems, meaning that this might lead to certain bias in the perceived usefulness of the IKEA mobile app. Moreover, the attitudes of users are affected by the simplicity of usage and the fit into everyday life of users of mobile communications systems but every consumer can have different level of skills using mobile applications and maybe for some the perceived ease of use might differ to others.

Koufaris (2002) says that in marketing there have been many studies on a variety of individual characteristics, like knowledge, motivation as well as range of environmental variables including family, culture and social class (Engel et al. 1990) but this thesis is not aiming for such broad results. The results of the study would not be applicable on just any type of business but specifically to those with similar approach with mobile application and similar product offer range as IKEA. Nevertheless, this simplification of the study on a bachelor level may have biased the results, however each of these limitations give an opportunity for future research in this domain.

Empirical findings

This section is dedicated to show the reader the analysis and the results that were obtained from the statistical approach. The section is divided into sub-sections to create a sense step by step. Whether the reader expects some analyses to be applicable to this thesis, there is a need for an explanation why were certain analyses important to the study while some of the analyses approaches were not applicable.

4.1 Descriptive Analysis

For better comprehension of the questionnaire answers and the data analysis. It is important to analyse the respondents. This approach therefore, shows the features on the population as a whole.

4.1.1 Respondent rate

The questionnaire was sent out to 150 respondents. However, only 82 of those respondents actually answered the questions. The number of the data compatible for this study was 20 out of those 82 responses. This is because not all the respondents are using the IKEA mobile app. The authors of the research assumed higher rate of IKEA mobile app users but the reality differs. The respondent rate is shown in the **Table 2** below.

Table 2 Respondent rate

No. of questionnaires sent out	150
No. of questionnaires received	82
Usable questionnaires	20

4.1.2 Respondent profile

The following can be provided on the respondents in this research.

4.1.2.1 Age

The largest frequency of responses (50%) was received from respondents in the 21– 25 year age category. The category that showed the lowest percentage of responses (10%) was the 41 years and older category, referring to the **Table 3** for the age profile of the respondents.

Table 3 The age of the respondents

Age group	Percent
21 - 25	50,0
26-30	15,0
31-35	10,0
36-40	15,0
41+	10,0

4.1.2.2 Gender

Both genders have been relatively equally represented in the sample of respondents.

4.1.2.3 Nationality

To the question of nationality, the respondents had only two, Swedish and non-Swedish options (referring to the Appendix 1). Although, 55% of the app users were Swedish, the rest was non-Swedish and 39,6% of the non-users were classified as Swedish with the rest being non-Swedish, of course.

4.1.2.4 Occupation

Occupation question had 4 choices: Student, Employed, Unemployed and Retired (referring to the Appendix 1). Among the participating respondents most dominant group were students with 50% of the total participation of the IKEA mobile application users.

4.1.2.5 Profile of the typical respondent

It could be argued that after analysing the control variables of the respondents who use the IKEA mobile application, the typical respondent could be described in the following way:

- Between 21 and 25 years of age
- Have Swedish as his-her first language
- Student

4.2 Reliability for the entire study

After the follow-up activities, 77 valid questionnaires have been received. However, only 20 of those were valid for the data analysis. This was due to lack of the respondent knowledge since this research only concerned IKEA app users.

Comparing the samples of non-users and users there are few things that stand out. Most of the respondents are in between the age of 21-25 which is explainable by the fact that most available respondents were other students. On the contrary, 33% of the non-users and 50% of users are employed. This should be explainable by higher income and different shopping behavior of the employed in general.

The reliability of the study was determined using a Cronbach Alpha over 30 items included in the questionnaire. The Cronbach Alpha was conducted on the sample of 20. Calculated score of 0,766 is greater than 0,7 which is regarded as a margin between the sufficient and good reliability (Hair, Black, Babin & Anderson, 2010).

4.2.1 Technology Acceptance Model

The model used by Wu and Wang (2005) was evaluated by structural equation modelling (SEM). Their model proved reliable and valid using the confirmatory factor analysis (CFA). Because this thesis is using the model modified by Wu and Wang (2005) it is important to state its credibility. Their model included 22 items that were describing seven of their model theoretical constructs. This study's simplified version of the model used (Number of the questions) describing five components of the model: perceived usefulness, perceived ease of use, compatibility, behavioral intention and actual purchase. However, the model developed by Wu and Wang (2005) proved (390/196) chi-square/degrees of freedom because of the difficulty of the sample size as well, their model had a good fit to the data. On the other hand, the model used in this thesis was not as successful with data collection to have enough ability to prove the good fit, but calculated score of Cronbach Alpha 0,766 is greater than 0,7 which is regarded as a good score (Hair et all. 2010).

Due to the lack of respondent knowledge, less than a third of responses were usable. In order to increase the strength of the test, five of the most significant items were chosen for the analysis. The following tables show Descriptive statistics from the variables chosen to be the variables representing each construct of the Technology acceptance model used in this study. The **Table 4**, **Table 5**, **Table 6** and **Table 7** show the frequency of which point of the Likert scale was used by how many respondents, and also represents it in percentage rates. All the descriptive Data is included in the Appendix 2.

Table 4 PU2 Perceived usefulness of the app-Using the IKEA app will make it easier for me to choose which item I will purchase

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	4	20,0	20,0	20,0
Valid Agree	10	50,0	50,0	70,0
Valid Strongly Agree	6	30,0	30,0	100,0
Total	20	100,0	100,0	

Table 5 PEOU4 Perceived ease of use-I find it easy to get the IKEA app to do what I want it to do

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	4	20,0	20,0	20,0
Valid Agree	14	70,0	70,0	90,0
Valid Strongly Agree	2	10,0	10,0	100,0
Total	20	100,0	100,0	

Table 6 C6 Compatibility-Using the IKEA app fits my lifestyle

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	5	25,0	25,0	25,0
Valid Agree	4	20,0	20,0	45,0
Valid Strongly Agree	11	55,0	55,0	100,0
Total	20	100,0	100,0	

Table 7 BI5 Behavior Intention-I would say positive things about the IKEA app

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	3	15,0	15,0	15,0
Agree	10	50,0	50,0	65,0
Strongly Agree	7	35,0	35,0	100,0
Total	20	100,0	100,0	

4.3 Correlation Analysis

Correlation between two different variables X and Y is a measure of the degree of linear association between the two variables. Depending whether p-value equals 1, means the variables are strongly positively correlated, if the p-value equals -1 means the variables are strongly negatively correlated (Williams & Shoemith, 2010). Interpreting the p-values: “Under the appropriate assumptions, the p-value is the conditional probability of observing a value of the computed statistic. A small p-value provides evidence against the Null Hypothesis. Simply reporting p-values and allowing readers to decide on significance seems a better approach.” (Weisberg, 2005: 31). Weisberg (2005) explains why this study simply states the p-values. Nevertheless, with the sample size of twenty respondents, it is not possible to obtain correct results for examination of more than just the p-values. In order to arrive at the most credible answers, the authors had to analyse step by step carefully. The results would be more reliable with five-time larger number of respondent with the IKEA mobile application experience and usage.

First step was to determine the correlation between the variables that belong under one construct.

Perceive Usefulness PU:

The variable PU1 showed significant correlation with PU2 variable at the $p < 0,002^{**}$ and Pearson Correlation $0,643^{**}$. The variable PU6 showed $p < 0,069^{+}$ with the Gender variable with the positive correlation of $0,415^{+}$ which represents the female population feels to have their privacy invaded by the IKEA mobile app. PU6 and PU1 showed negative correlation at the significant level $p < 0,086^{+}$. Although. Their negative correlation proves that it is a reversed question which actually means that the relationship is positive looking at both variables from non-reversed perspective. Variables PU6 and PU3 show significant correlation

$p < 0,039^*$. None of the other variables within the perceived usefulness theoretical construct showed significant correlations, all the results are shown in the **Table 8** PU Sig. & Pearson Correlation.

Table 8 PU Sig. & Pearson Correlation

Item	Variable	Sig.	Correlation
PU1	Using the IKEA app enables me to complete shopping quickly (better time spent)	,002	,643**
PU2	Using the IKEA app will make it easier for me to choose which item I will purchase		
PU6	The IKEA app invades my privacy	,069	,415+
Gender	(representing female population)		
PU6	The IKEA app invades my privacy	,086	-,393+
PU1	Using the IKEA app enables me to complete shopping quickly (better time spent)		
PU6	The IKEA app invades my privacy	,039	,464*
PU3	Using the IKEA app is a waste of resources		

Perceived ease of use PEOU:

The variables PEOU1 and PEOU4 showed positive correlation with $p < 0,035^*$. Variables PEOU2 and Gender variable, however indicate that female find the IKEA app to be flexible to interactive with, at the significance level $p < 0,068+$. Moreover, Occupation variable is correlated with PEOU1 variable with $p < 0,011^*$. No other variables within the perceived ease of use theoretical construct showed correlation among themselves. All the results are shown in the **Table 9** PEOU Sig. & Pearson Correlation.

Table 9 PEOU Sig. & Pearson Correlation

Item	Variable	Sig.	Correlation
PEOU1	I find it easy to get the IKEA app to do what I want it to do	,035	,475*
PEOU4	Learning to operate the IKEA app was easy for me		
PEOU2	I find the IKEA app to be flexible to interact with	,068	-,416+
Gender			

PEOU1	I find it easy to get the IKEA app to do what I want it to do	,011	,557*
Occupation			

Compatibility C:

The variable C1 shows strong correlation with $p < 0,005^{**}$ with Age variable. There is also strong correlation between Occupation variable and C1 with $p < 0,006^{**}$. The variable C6 on the other hand, proves that female population claims that using the IKEA mobile app fits with their lifestyle with $p < 0,086+$. Both variables C1 and C6 show significant correlation with $p < 0,029^*$. C1 and C5 show weaker significance with $p < 0,051+$. There is also weak correlation between Nationality variable and C4 with $p < 0,086+$. C2 and C4, on the other hand show stronger correlation with $p < 0,11$. All of the results are shown in the **Table 10 C Sig. & Pearson Correlation** below.

Table 10 C Sig. & Pearson Correlation

Item	Variable	Sig.	Correlation
C1	The IKEA app fits in with my way of shopping	,005	,601**
Age			
C6	Using the IKEA app fits my lifestyle	,086	-,394+
Gender			
C1	The IKEA app fits in with my way of shopping	,029	,489*
C6	Using the IKEA app fits my lifestyle		
C1	The IKEA app fits in with my way of shopping	,051	,442+
C5	Using the IKEA app is compatible with most aspects of my online behavior		
C4	Using the IKEA's app fits well with the way I like to engage with IKEA	,086	,394+
Nationality			
C2	Using the IKEA app fits my preferred routine for shopping at IKEA	,011	,553*
C4	Using the IKEA's app fits well with the way I like to engage with IKEA		
C1	The IKEA app fits in with my way of shopping	,006	,588**
Occupation			

Behavioral Intention BI:

The variables BI1 and BI5 show a strong correlation with the p-value $<0,006^{**}$. BI2 and BI5 show weaker positive correlation with $p<0,080+$ and BI3 and BI5 also show weak correlation with the $p<0,062+$. All the results are shown in the **Table 11** BI Sig. & Pearson Correlation below. No other variables of the behavioural intention showed significant correlation.

Table 11 BI Sig. & Pearson Correlation

Item	Variable	Sig.	Correlation
BI1	I use (intend to use) the IKEA app frequently	,006	,593**
BI5	I would say positive things about the IKEA app		
BI2	I use (intend to use) the IKEA app whenever appropriate	,080	,400+
BI5	I would say positive things about the IKEA app		
BI3	Given that I had access to the IKEA app, I predict that I will use it	,062	,424+
BI5	I would say positive things about the IKEA app		

After conducting the bivariate correlation to see the relationships between the variables within the theoretical constructs, the authors could move to the correlation of all the variables. Second step was done to test the correlation only between the most significant variables for the model of this study. This excludes all the other variables and leaves four independent variables. In order to proceed to proper linear regression, it is necessary to see the correlation of these variables.

4.3.1 Model variables correlation

Based on the correlation analysis of all the variables, these are the model construct representatives for Independent variables:

Perceived usefulness – PU2 (Using the IKEA app will make it easier for me to choose which item I will purchase)

Perceived ease of use – PEOU4 (Learning to operate the IKEA app was easy for me)

Compatibility – C6 (Using the IKEA app fits my lifestyle)

Behavioral Intention – BI5 (I would say positive things about the IKEA app)

The variable C6 and the Gender variable showed the correlation again which is obvious as it was already shown in the table **Table 10** C Sig. & Pearson Correlation. However, the variables tested prove very strong relationship between PU2 and BI5 with $p < 0,000^{**}$. That could be interpreted as the Perceived usefulness has positive relationship on Behavioral Intention, proving the Hypothesis 1 confirmation. There is also positive relationship between PEOU4 and BI5, however weaker correlation with $p < 0,086^{+}$. This could also confirm the Hypothesis 3. However, with the sample size of 20, the authors could not consider these results as significant (all the figures are shown in the **Table 12**).

Table 12 The model variables Sig. & Pearson Correlation

Item	Variable	Sig.	Correlation
PEOU4	Learning to operate the IKEA app was easy for me	,086	,393+
BI5	I would say positive things about the IKEA app		
PU2	Using the IKEA app will make it easier for me to choose which item I will purchase	,000	,800**
BI5	I would say positive things about the IKEA app		

4.4 Factor Analysis

Having so many variables (questions) in the data collection carries an importance of the factor analysis. Factor analysis narrows down the variables into the most important factors to the study. What is important to say is that this thesis had factor analysis as a goal as well. However, because of the sample number of actual IKEA mobile app users being so small, the values extracted are too misleading to provide readers with detailed results.

All the variables gave the factor loading values shown in the **Table 13**. Usually the variables with the highest factor loading would have been the most significant to the study.

Table 13 All the variables and their factor loadings

Item	Measure	Factor loading
PU1	Using the IKEA app enables me to complete shopping quickly (better time spent)	,786
PU2	Using the IKEA app will make it easier for me to choose which item I will purchase	,726
PU3	Using the IKEA app is a waste of resources	,133
PU4	I use the IKEA app because I like innovative offerings by IKEA	,591
PU5	The IKEA app makes my life better	,632
PU6	The IKEA app invades my privacy	-,547
PEOU1	I find it easy to get the IKEA app to do what I want it to do	,744
PEOU2	I find the IKEA app to be flexible to interact with	,346
PEOU3	Using the IKEA app requires minimum effort	,041
PEOU4	Learning to operate the IKEA app was easy for me	,511
PEOU5	I prefer using IKEA app to scan the product code instead of writing it down	,017
C1	The IKEA app fits in with my way of shopping	,751
C2	Using the IKEA app fits my preferred routine for shopping at IKEA	,574
C3	The IKEA app enables me to shop in the way I prefer	,609
C4	Using the IKEA's app fits well with the way I like to engage with IKEA	,622
C5	Using the IKEA app is compatible with most aspects of my online behavior	,752
C6	Using the IKEA app fits my lifestyle	,656
BI1	I use (intend to use) the IKEA app frequently	,571
BI2	I use (intend to use) the IKEA app whenever appropriate	,354
BI3	Given that I had access to the IKEA app, I predict that I will use it	,290
BI4	I would recommend the IKEA app to others	,636
BI5	I would say positive things about the IKEA app	,747
BI6	I will probably use the IKEA app when shopping next time at IKEA	,477
AP1	I do not think the IKEA app influences my shopping behavior	,382
AP2	I always buy what I had planned before stepping in the store	,057

AP3	I am easily influenced by new technology	,308
AP4	I always need my phone to make the best decision when shopping	,195
AP5	I will purchase a product based on the information I have obtained through IKEA app	,275
AP6	If I can find a product I need through the IKEA app I will buy it right away	,592
AP7	I often decide on the product using the IKEA app	,149

After running the factor analysis on the variables, the authors obtained the **Table 14**. The table represents two questions of each of the model construct. The reason why values are the same for both questions within one construct is that they are highly correlated. Nevertheless, whether the authors are interested in the smallest number possible (which would be 1) for each theoretical construct of the model they can choose any since they provide the same values of factor loading. However, because factor analysis was run on the sample size of 20 respondents, this does not give the authors the results to proceed with the factor analysis into further steps. This is why Factor Analysis Reliability was not conducted.

Table 14 Standardized factor loadings of significant variables

Item	Measure	Factor loading
PU1	Using the IKEA app enables me to complete shopping quickly (better time spent)	,906
PU2	Using the IKEA app will make it easier for me to choose which item I will purchase	,906
PEOU1	I find it easy to get the IKEA app to do what I want it to do	,859
PEOU2	Learning to operate the IKEA app was easy for me	,859
C1	The IKEA app fits in with my way of shopping	,744
C2	Using the IKEA app fits my lifestyle	,744
BI1	I would recommend the IKEA app to others	,902
BI2	I would say positive things about the IKEA app	,902
AP	Usage-If I can find a product I need through the IKEA app I will buy it right away	,873

4.5 Regression Analysis

Linear Regression dealt with independent variables:

Perceived usefulness – PU2 (Using the IKEA app will make it easier for me to choose which item I will purchase)

Perceived ease of use – PEOU4 (Learning to operate the IKEA app was easy for me)

Compatibility – C6 (Using the IKEA app fits my lifestyle)

Behavioral Intention – BI (I would say positive things about the IKEA app)

And Actual Purchase as the dependent variable:

AP (If I can find a product I need through the IKEA app I will buy it right away)

The **Table 15** ANOVA clearly shows that there is no significance of the Linear Regression run on 20 respondents. The $p < 0,635$ is too high to provide any fruitful information for the research. With these results, the authors can only assume that the linear regression would make sense with larger sample size. The statistical tests were run correctly the only error is the sample size.

Table 15 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4,962	8	,620	,772	,635 ^b
Residual	8,838	11	,803		
Total	13,800	19			

Findings interpretation

To connect the theoretical framework used in the thesis this section will be dedicated to the result interpretation from a theoretical perspective.

5.1 Single construct relationships

The first correlation test run on the single constructs significance proved strong relationships in in all single theoretical constructs of the Technology Acceptance Model developed by Wu and Wang (2005): *perceived usefulness, perceived ease of use, compatibility and behavioral intention*.

5.1.1 Perceived usefulness

Positive relationship between the variables **PU1** (app enables me to complete shopping quickly) and **PU2** (app will make it easier for me to choose which item I will purchase) means that app is helpful in making the shopping decision supporting the study of Pan & Zhang (2011). Islam et al. (2013) state that m-commerce provides benefits in the decision making. The relationships in the single construct of the perceived usefulness also indicate that whether there would be the IKEA app evaluation, users would obtain information about the IKEA app (Benlian, Titah and Hess, 2012) that would encourage them to download it.

In addition, there is a positive relationship between the **PU6** (IKEA app invades my privacy) and **Gender variable** (female population) interpreting it as female population might be more aware of the negative side of the IKEA app usage. It is supported by Begany (2014) especially with privacy becoming the main issue with the rise of the mobile online traffic also important in the study of behavioral intention to use mobile banking (Luarn & Lin, 2005) where privacy issues play an important role.

5.1.2 Perceived ease of use

Negative relationship shows female **gender** might find the app flexible to interact with. There are no reliable studies conducted on the difference between how genders approach the mobile app. This fact might pursue some incentives for further research for investigation of the gender differentiation in the mobile application usage. However, a service Catalog Spree which offers all-in-one catalog app, reports that 73% of their 500,000 users are female (Catalogspree.com, 2015). This fact enforces the findings that female users might perceive informative apps, such as IKEA app, more valuable. In another words, Kima et al. (2014) viewed information as a motive related to usefulness, in this case applied for the motive of female population. However, the sample size is too small to assume that all the female population has a higher motive to use the IKEA app since they perceive it as more valuable. On

the other hand, supposing that women like shopping more than men, users have a probability of using a specific application system if it would increase his or her job performance (Davis et al., 1989; Islam et al., 2013; Davis, 1989). In the case of the IKEA app, women would use the app more if it would increase her shopping performance.

5.1.3 Compatibility

Significantly strong relationship appears between the *Compatibility* variable C1 (app fits in my way of shopping) and the control variable of Occupation. This relationship supports that people change their way of shopping as they change their occupation. However, the authors could not support or argue against any arguments in this situation. It is simply because there is no research done on occupation influences on the mobile applications usage. None of the other variables within compatibility showed relationships among themselves. It could be assumed that the respondents do not have a relationship with what they think or feel about the IKEA innovation (Tornatzky and Klein, 1982) but with such small sample even this statement is questionable.

5.1.4 Behavioral intention

Behavioral Intention rather confirms the variable investigating the usage of IKEA app has a positive relationship of the users saying positive things about IKEA mobile app. Weaker positive relationships appeared in the usage of the IKEA app whenever appropriate and saying positive things about the IKEA app. Moreover, it is rather evident what the results have shown. If a user has an access to the IKEA app they would use it, even they would say positive things about it. This test proves that when the user has an access to the IKEA app he or she would say positive things about it in the app reviews (Benlian, Titah and Hess, 2012). It can be assumed that this would influence the further potential IKEA app users in deciding whether or not they should download the IKEA app. Kima et al. (2014) claims that such mobile app reviews by app users are another factor in predicting the mobile app usage, which is theoretically explained by theory of reasoned action (TRA). Theory of reasoned action is a predictor of human behavior in any domain (Wu & Wang, 2005). Furthermore, IKEA mobile app is downloaded for free which means there should already be an incentive to download the application since the cost would not be a problem because there is none. Rather the model did not test the cost as a construct of the IKEA app like Wu and Wang (2005) did. On the contrary, with such small sample size there is not a strong support for behavioral intention to use the IKEA app. Therefore, it is difficult to confirm or not what previous studies discovered on behavioral intention. The major factor of individual usage is

behavioral intention and intention to use mobile services are reasonable indicator of future system use (Ajzen, 1991; Davis et al., 1989; Yi et al., 2006; Liao et al., 2007; Kuo and Yen, 2009; Mafe et al., 2010).

5.2 Model variable relationships

The attitude construct by Davis (1986) in the original technology acceptance model was explained to be a part of the behavioral criterion, the authors assumed more of the respondents would use the IKEA app. After analyzing the results authors found out the sample population did not hold strong attitude toward using since only 20 out of 82 respondents used the IKEA app. These relationships, however, support weakness of the original acceptance technology model. Kima et al. (2014) pointed out the inability to explain other possible factors besides usefulness and ease of use (Mathieson 1991; Moon and Kim 2001; Venkatesh 2000). In this study, only perceived usefulness and perceived ease of use showed significance.

Perceived usefulness confirmed the H1 and does have a direct effect on behavioral intention, also supports the study of Wu and Wang (2005). It could be assumed that because the IKEA mobile app is an informative tool, the information as a motive is related to usefulness Kima et al. (2014). Also, Davis et al. (1989), Islam et al. (2013) and Davis (1989) view usefulness as a probability of using the application system to increase the job performance. In this case, increasing the shopping performance. Nevertheless, when IKEA app is viewed as an m-commerce technological system that plays important role in everyday activities, m-commerce provides many advantages when using mobile phones as an info-communication tool (Islam et al., 2013).

H2 was not confirmed. On the contrary, compatibility has no direct effect on behavioral intention. According to these results compatibility is not important for IKEA app. Moreover, Rogers (1962) described compatibility as the degree to which using an innovation is perceived as consistent with the existing sociocultural values and beliefs, past and present experiences, and needs of potential adopters (Karahanna, Argwal and Angst, 2006, p. 126-127). And Rogers (1983) describes compatibility as the degree to which IKEA mobile app is aligned with the potential user's existing values, previous experience and current needs. It could be assumed that because the IKEA app is rather new and not widely used yet, it does not fit with sociocultural values and beliefs and the past experiences of the non-users of the IKEA app.

Moreover, it does not satisfy IKEA customers' current needs. Therefore, there is no significant advantage for IKEA as the authors intended to find out (however it is important to remind the sample size is too small to refer to these results as valuable).

Since Wu and Wang (2005) considered compatibility as a construct with the most significant influence on behavioral intention, this study proves the opposite. Compatibility performed as a significant factor in the previous studies also for Islam et al. (2013) who indicated compatibility and perceived usefulness as the key factors for using advanced mobile phone services. But in this case study, only perceived usefulness could be considered as a key factor for using the advanced mobile phone services.

Additionally, there is a weak positive relationship between *perceived ease of use* and *behavioral intention*. Although it is weak it still confirms the hypothesis H3 about perceived ease of use having direct effect on behavioral intention. On the other hand, Wu and Wang (2005) observed perceived ease of use influencing behavioral intention to use indirectly and that perceived ease of use indirectly influences intention to use through perceived usefulness. This study did test such interrelationships. Moreover, this thesis confirms previous studies of Mafe, Blas and Tavera-Mesi (2010) in the importance of perceived ease of use influencing intention to adopt the system, unlike Islam et al. (2013) who argue the opposite.

H4 was not confirmed. In another research by Adobe, findings say that two-thirds of shoppers who used their phones preferred shopping via a mobile-optimized website compared to using an "app" (Schell, 2011). It could be argued that the respondents of IKEA mobile app do not really use the app because they do not prefer the app to mobile-optimized website. However, this phenomenon was not center of attention of the thesis. Further investigation, on the other hand, could look into the difference of preference of IKEA customers. Nevertheless, the theory of reasoned action that serves as a predictor of human behavior in any domain Wu and Wang, 2005 was not supported from the research model on actual purchase of IKEA goods. It could only be used as a predictor of a usage of IKEA mobile app. Rather, not confirmed H4 supports Morwitz, (1997) & (2000) that behavioral intention is not perfectly correlated with actual purchase (Barber, Kuo, Bishop and Goodman, 2012). Koufaris (2000) claims that customers hold certain purchase intention when they enter the store having already planned what they will purchase. But in fact, they usually end up buying unplanned items. But, the results of this study refute such unplanned purchasing to be caused by using the app inside the store. Therefore, IKEA mobile app users' purchasing is not influenced by the app itself.

The mobile phone services had different evolutionary paths in the world, they have evolved differently in some countries and cultures to others. The acceptance of IKEA mobile app therefore, differs from country to country and market to market (Islam et al, 2013). However, nationality did not show any relationship with any of the theoretical constructs. For example, over fifty percent of the US shoppers will by 2014 have their buying decisions influenced by their mobile phone to at least some extent Andersen (2010). Because it is already 2015, it can be assumed that the prediction is already happening. On the contrary, it could be probably applied in the United States, but this study was conducted on Swedish and Other nationalities only. Nevertheless, the nationality could also supposedly explain why there is no direct effect of the behavioral intention on the actual purchase.

To sum up, both perceived usefulness and perceived ease of use influence behavioral intention positively. This fact explains why subjects use the technology based on their perceived and obtained usefulness. This is aligned with the previous studies of Wu and Wang (2005), Un, Jan and Conteras (2010) and Venkatesh (2000) but also with the original research by Davis (1989). However, these results also indicate that perceived and obtained usefulness should drive the positive word of mouth. On the other hand, the two other hypotheses H2, which tested the direct effect of compatibility on behavioral intention, and H4, which tested the direct effect of behavioral intention on actual purchase, were not confirmed. The theoretical contribution, under the assumption that the IKEA mobile app is not accepted yet, can not be classified as valuable. The modified model with the appropriate methodology of testing it did not approve or disapprove of the TAM used in such modification for future research of mobile applications. Overall, it could be said that the IKEA mobile app is not accepted as a technology yet. This is due to an individual's psychological state with his or her voluntary use of the IKEA mobile app (Gattiker, 1990), or it is likely to provide the authors with such results due to a low sample size.

Discussion and further research

After the burst of the “*www bubble*” at the beginning of century and consolidation of the market, quick development of the mobile technologies brought a new revitalizing force. In contrast to websites which are rather static tool of mass information, mobile applications offer a more flexible approach. An approach which makes them a valuable tool for various tasks but especially for developing a relationship with customer (Bong Na, Marshall and Lane Keller, 1999).

Since the original Technology Acceptance Model was published in 1986, it was applied for a wide spectrum of researches and often extended well beyond the original. While this study extended the original for the construct of *compatibility*, some of the modern additions to the model were excluded because they were not applicable on the IKEA app case but also outside of the scope of a bachelor thesis.

Even though, the lack of respondent knowledge somewhat made it difficult for the authors to investigate this research, there were two strong hints about the correlation of gender and app perception. Firstly, female gender seems to perceive informative apps more useful. Although, there are no reliable studies conducted on the difference of the approach towards mobile apps regarding the gender, secondary data shows the difference in informative app usage might be as high as 20% in the favour of women. Secondly, our results show female gender is also having a tendency to have a higher awareness of the privacy issues regarding the mobile apps.

Although this research was not focusing on the gender differences, this finding emphasize a need for a further research. Consequentially, it means that gender optimized informative apps could become a thing of the future. Authors also learned that occupation is significant in the differences how would the IKEA mobile app be perceived. The occupation factor was, however, difference between student, employed, unemployed and retired. Because authors stumbled upon this finding together as the preferences of the customers matter in the IKEA mobile app perception, there is an opportunity for further research considering mobile application for their marketing communication strategies.

The most interesting findings of this research might be the correlation which was found in the relationship between perceived usefulness, perceived ease of use and behavioural intention. Both the constructs regarding the faster purchase decision and effortless learning process are perceived to lead towards the positive word of mouth.

Therefore, informative apps must focus on being user friendly in order to gain the benefits of the positive word of mouth. This fact is very important today due to the effect of social media which have tremendously increased both volume and the speed of information flow. Ultimately it would result in the increased usage of the app because it would be perceived as a valuable free tool.

6.1 Conclusion

The aim of this thesis was to investigate the perception of users towards the IKEA mobile application. This was done by application of the slightly modified Technology Acceptance Model with the main focus on the perceived usefulness, perceived ease of use and compatibility. Furthermore, another goal was to explore the relationship between the users' behaviour intention and the actual purchase since purchase is the very reason of the app development.

The authors assumed that the IKEA mobile app is used more frequently, but sampling process proved the opposite. The initial aim was at the contribution of the study to IKEA.

Technology Acceptance Model has been widely criticized for the lack of the longitudinal studies and lack of the flexibility regarding the intensity of different use contexts (adopting the technology and then abandoning it or vice-versa). However, this model was the most suitable for investigating the perception of the free informative tool (app) because of its wide adaptation on the informative technologies but also because mobile applications are a phenomenon with several years of usage already.

Unfortunately, the biggest problem about this research was lack of respondent knowledge. Only responses from the participants who had the experience regarding the IKEA app were valid. Combined with the lack of time and resources, this resulted with a low amount of collected data and ultimately to inability to make assumptions about the actual purchase.

However, the importance of the Perceived usefulness and Perceived ease of use proved to be the most important elements in the perception of the IKEA mobile app with the consequential assumption that positive attitude towards the app is driven by user-friendliness and its ability to make a purchasing decision easier.

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Appendices

Appendix 1 Questionnaire

Q1 Age

- <20
- 21 – 25
- 26 – 30
- 31 – 35
- 36 – 40
- 41+

Q2 Gender

- Male
- Female

Q3 Nationality

- Swedish
- Other

Q4 Occupation

- Student
- Employed
- Unemployed
- Retired

Q6 Experience with IKEA app

- Yes
- No

Q8 Perceived usefulness of the app

- Using the IKEA app enables me to complete shopping quickly (better time spent)
- Using the IKEA app will make it easier for me to choose which item I will purchase
- Using the IKEA app is a waste of resources

- I use the IKEA app because I like innovative offerings by IKEA
- The IKEA app makes my life better
- The IKEA app invades my privacy

Q11 Perceived ease of use

- I find it easy to get the IKEA app to do what I want it to do
- I find the IKEA app to be flexible to interact with
- Using the IKEA app requires minimum effort
- Learning to operate the IKEA app was easy for me
- I prefer using IKEA app to scan the product code instead of writing it down

Q12 Compatibility

- The IKEA app fits in with my way of shopping
- Using the IKEA app fits my preferred routine for shopping at IKEA
- The IKEA app enables me to shop in the way I prefer
- Using the IKEA's app fits well with the way I like to engage with IKEA
- Using the IKEA app is compatible with most aspects of my online behaviour
- Using the IKEA app fits my lifestyle

Q9 Behavior Intention

- I use (intend to use) the IKEA app frequently.
- I use (intend to use) the IKEA app whenever appropriate.
- Given that I had access to the IKEA app, I predict that I will use it
- I would recommend the IKEA app to others
- I would say positive things about the IKEA app

Q13 Actual purchase / usage

- I do not think the IKEA app influences my shopping behaviour
- I always buy what I had planned before stepping in the store.
- I am easily influenced by new technology
- I always need my phone to make the best decision when shopping
- I will purchase a product based on the information I have obtained through IKEA app If I can find a product
- I need through the IKEA app I will buy it right away

Appendix 2 Statistical data tables

Table 4 PU2 Perceived usefulness of the app-Using the IKEA app will make it easier for me to choose which item I will purchase

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	20	3	5	4,10	,718
Valid N (listwise)	20				

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	4	20,0	20,0	20,0
Agree	10	50,0	50,0	70,0
Strongly Agree	6	30,0	30,0	100,0
Total	20	100,0	100,0	

Table 5 PEOU4 Perceived ease of use-I find it easy to get the IKEA app to do what I want it to do

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	20	3	5	3,90	,553
Valid N (listwise)	20				

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	4	20,0	20,0	20,0
Agree	14	70,0	70,0	90,0
Strongly Agree	2	10,0	10,0	100,0
Total	20	100,0	100,0	

Table 6 C6 Compatibility-Using the IKEA app fits my lifestyle

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	20	3	5	4,30	,865
Valid N (listwise)	20				

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	5	25,0	25,0	25,0
Agree	4	20,0	20,0	45,0
Strongly Agree	11	55,0	55,0	100,0
Total	20	100,0	100,0	

Table 7 BI5 Behavior Intention-I would say positive things about the IKEA app

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Valid N (listwise)	20	3	5	4,20	,696

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neither Agree nor Disagree	3	15,0	15,0	15,0
Agree	10	50,0	50,0	65,0
Strongly Agree	7	35,0	35,0	100,0
Total	20	100,0	100,0	

Appendix 3 Linear Regression

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4,962	8	,620	,772	,635 ^b
Residual	8,838	11	,803		
Total	13,800	19			

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,600 ^a	,360	-,106	,896

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	6,054	2,863		2,115	,058
Behavior Intention-I would say positive things about the IKEA app	,064	,672	,052	,096	,926
Compatibility-Using the IKEA app fits my lifestyle	-,014	,294	-,014	-,046	,964
Perceived ease of use-I find it easy to get the IKEA app to do what I want it to do	,043	,509	,028	,085	,934
Perceived usefulness of the app-Using the IKEA app will make it easier for me to choose which item I will purchase	,093	,560	,079	,167	,870
Age	-,330	,238	-,570	-1,384	,194
Gender	-,529	,502	-,317	-1,053	,315
Nationality	-,960	,663	-,575	-1,448	,176
Occupation	-,433	,635	-,261	-,682	,509

a. Dependent Variable: Actual Purchase / Usage-If I can find a product I need through the IKEA app I will buy it right away