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Mobile Commerce App Adoption: Consumer Behavior Differences between Europe and Asia

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ABSTRACT

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Title: 'Mobile Commerce App Adoption: Consumer Behavior Differences between Europe and Asia'

Research Question: 1. What are the differences between European and Asian consumer behavior of adopting m-commerce apps?

2. Why is there a different level of m-commerce app adoption between European and Asian consumers?

Research Purpose: The purpose of this research is to investigate the reasons why consumer adoption behavior of m-commerce apps in the European market differs from those in the Asian market. Our findings will contribute to helping to raise their level of m-commerce app adoption in the European market.

Method: This research is a qualitative study and utilizes survey as a research design. Interviews designed according to a theoretical framework were used to collect data for analysis. The interviews were conducted in four countries: UK, Sweden, China and South Korea.

Conclusion: Our results showed that European consumers lacked knowledge and were unable to perceive the full conveniences of using apps, compared to Asian respondents. What's more European consumers placed a lot of importance on risks and anxieties when adopting apps. Findings showed that these differences could be explained through Hofstede's cultural dimensions.

Keywords: *Mobile commerce, m-commerce, Technology Acceptance Model, TAM Adoption Behaviour, Cultural Difference.*

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CHAPTER 1 – INTRODUCTION

1.1 BACKGROUND

1.1.1 ELECTRONIC COMMERCE

Driven by the widespread understanding of the Internet and web technologies, the method of conducting business has changed remarkably, particularly within commercial activities. Electronic commerce, also known as e-commerce, is booming in this technological and economic environment. "E-commerce is seen as a general term for any type of business, or commercial transaction that involves the transfer of information across the Internet" (Maamar, 2003, p.252). Goethals, Carugati and Leclercq consider e-commerce to be "a process whereby the Internet is used as a channel to find information about a product or service, to find a supplier, and to actually buy the product" (2009, p.90). Since its emergence, e-commerce has had a major impact on traditional commerce, and continues to change the commerce structure of market economies.

1.1.3 MOBILE COMMERCE

With the growing power of e-commerce, and advanced wireless technologies and devices, mobile commerce, also known as m-commerce, is moving rapidly to the forefront of business activities. M-commerce can be viewed as being both a subset, and a further development of e-commerce (Wakefield & Whitten, 2006). A new report from Experian Marketing Services shows that m-commerce is beginning to outpace e-commerce in some product categories (Montgallo, 2014). Chaffey defines m-commerce as "electronic transactions and communications conducted using mobile devices such as laptops, PDAs and mobile phones, and typically with a wireless connection" (2007, p.132). Leung and Antypas consider m-commerce as both "content delivery (notification and reporting) and transactions (purchasing and data entry) on mobile devices" (2001, p.12). To put it simply, m-commerce refers to the use of mobile devices to buy or sell products, services, or information at anytime, anywhere via a wireless network. M-commerce is made up of different forms of commercial activities, including, mobile shopping, mobile ticketing and mobile wallets. Moreover, studies have

shown that as retailers have launched more mobile sites, an interesting trend among consumers has been seen, where consumers have now begun to visit physical stores to research products, and later make purchases through the mobile site (MATA, 2014).

1.1.3 M-COMMERCE APPS

Mobile devices consist of different electronic products, such as smartphones, PDAs and handheld games consoles. In this research, we will only focus on m-commerce that is implemented on smartphones, with particular attention to m-commerce that is conducted through specific retail apps, as opposed to mobile friendly websites. Mobile apps are a significant aspect of m-commerce, Whitfield (2013) estimates there were 1.2 billion people worldwide using mobile apps at the end of 2012, if figures continue to grow at a constant rate of 29.8 percent each year, there will be 4.4 billion users by the end of 2017. Mobile apps have a huge potential market, Portio Research (2013) predicts that there will be more than 200 billion app downloads per year by the end of 2017, with revenue reaching 63.5 billion US dollars. It has been noted that in some countries app users spend more time connected than mobile site users, which includes apps for e-tailing companies such Amazon and eBay (comScore, 2012). Furthermore, these e-tailers are finding that consumers are willing to use smartphone apps to enhance their shopping experience (Nielsen, 2012). Mobile apps have become a more acceptable way to conduct mobile commerce than mobile sites (Compuware, 2013). The adoption of mobile apps will have significant influence on m-commerce.

1.2 PROBLEM DESCRIPTION

It is predicted that consumers around the world are expected to spend 119 billion US dollars on goods and services purchased via mobile phones in 2015. That number represents 8 percent of the total e-commerce market (MATA, 2014). Furthermore, research also estimates that the m-commerce market is expected to account for 24.4 percent of overall e-commerce revenues by the end of 2017 (ABIresearch, 2012). M-commerce is becoming more and more popular all over the world, yet it does not have the same performance in each market.

1.2.1 ASIAN MARKETS

In recent years, m-commerce has been thriving in the Asian market. An annual e-commerce survey showed that two-thirds of consumers in the Asia region go online to shop. What is notable is that nearly 100 percent of respondents from China indicated they made at least one online purchase in the last three months and 59.4 percent of them made their purchases via smartphones. (Hong, 2014)

According to a recent survey from SAP, nearly 80 percent of their consumers in Asia have experience using their smartphones to pay utility bills or handle other financial responsibilities. Approximately, 42 percent of them said that they have used their mobile devices to purchase products online and plan to continue doing so in the future (Vagus, 2014a).

China is considered one of the most promising markets in the m-commerce space currently. The country's retailers have been investing heavily in their mobile initiatives in an effort to engage consumers more effectively (Vagus, 2014a). Second to China, in South Korea, 37 percent of online shoppers were recorded as having made an m-commerce purchase during 2012. Similar trends are also being seen in Indonesia, Malaysia, India, Vietnam, Japan and Thailand (Gonzalez, 2013).

1.2.2 EUROPEAN MARKETS

According to results from a study based on the perspectives of 14,000 consumers in Europe, the m-commerce market is growing substantially in several European countries. A report commissioned by Google shows that the number of British adults that make purchases online from their smartphones is the highest within in the EU. Approximately 32% of shoppers in the United Kingdom participate in m-commerce on a monthly basis, followed by 19% of adults in Sweden (Vagus, 2014b).

However, compared with Asian countries, European m-commerce markets still lag behind in adoption rates. Based on a 2013 survey from eMarket, UK Internet users show the highest levels of m-commerce among developed nations listed in 2013, with 10% of Internet users making purchases using a mobile device.

However, the differences are clear when compared to 15 percent of Internet users in India and 18 percent of Internet users in China buying with a mobile device.

1.2.3 DIFFERENCES IN M-COMMERCE APP ADOPTION BETWEEN MARKETS

In recent years, the growth of m-commerce in Asian and European markets has been due to the rapid development of Internet-based technologies and increasing Internet users. However, there is a large distinction between the adoption of m-commerce in Asian and European markets; with much slower adoption rates being experienced in the European markets. It has been theorized that these problems may be due to the complexity of transactions, perceived lack of security, and lack of user-friendly mobile portals (Frolick and Chen, 2004; Siau and Shen, 2003). Moreover, cultural factors may also be the cause of the differences of consumer adoption behaviour of m-commerce.

M-commerce will soon be a dominant force in business and society compared with E-commerce (Senn, 2000). It has attracted the attention of both practitioners and academics. Although there have been plenty of studies on m-commerce activities, research into the adoption of m-commerce mobile apps is a rarely studied field (Niranjanamurthy, Kavyahsree, Jagannath & Chahar, 2013). Furthermore, to achieve success in m-commerce, companies must first understand consumer behavior toward m-commerce mobile app adoption.

1.3 RESEARCH PURPOSE

The purpose of this research is to develop a clearer understanding on the differences between m-commerce app adoption between European and Asian markets. Through applying several technology adoption and behavioral models we aim to perform research on the ways in which European and Asian consumers adopt mobile apps differently. Then through the utilization of Hofstede's cultural dimensions, an examination into why differences occur between these two cultures will be conducted.

Our research is in the field consumer behaviour, adoption behaviour of m-commerce apps and the influence of cultural differences on consumer adoption

behaviour. The findings from our research will provide contributions by highlighting key characteristics of European consumers that prevent or assist in the adoption of m-commerce. Moreover, identifying the aspects of Asian m-commerce app adoption behaviour that explains why m-commerce is at a high level in the Asian market. In addition, through the identification and explanation of these key characteristics and differences, m-commerce apps and adoption strategies can be developed that will aid in raising the adoption of m-commerce apps in Europe to the level of that of the Asian market.

1.4 RESEARCH QUESTION

The questions we wish to answer with this research are two-fold:

1. What are the differences between European and Asian consumer behaviour of adopting M-commerce apps?
2. Why is there a different level of m-commerce app adoption between European and Asian consumers?

1.5 DISPOSITION

This thesis will be laid out into the following six chapters. In Chapter 1, background on the research topic, research purpose and research questions are presented. Chapter 2 presents a literature review on mobile commerce, consumer behavior, and related theoretical models as well as introducing the theoretical framework that will be used to lead this research. In Chapter 3, the methodology of conducting our research is discussed, followed by the analysis of our results in Chapter 4. In Chapter 5, we will discuss our findings and provide an in-depth understanding of our research, comparing our findings with past research. Finally, in Chapter 6 we will present our conclusions, limitations and suggestions for further research.

CHAPTER 2 – LITERATURE REVIEW

2.1 E-COMMERCE, M-COMMERCE AND MOBILE APPS

2.1.1 IDENTIFYING DIFFERENCES BETWEEN E-COMMERCE AND M-COMMERCE

E-commerce is an all-encompassing term referring to any business activity that occurs online (Maamar, 2003; Niranjanamurthy, et al., 2013). M-commerce is a natural extension of e-commerce (Wakefield & Whitten, 2006), which includes electronic transactions that occur through mobile networks.

Au and Kauffman classify m-commerce as any payment that incorporates a mobile device to "initiate, authorize and confirm an exchange of financial value in return for goods and services" (2008, p.141). A mobile device can be any device ranging from mobile phones, tablets and handheld games consoles (Bandyopadhyay, 2013). Unlike e-commerce, m-commerce has the advantage of allowing individuals to shop and conduct business anywhere in the world, at any time without the limitations of needing access to a desktop pc (Maamar, 2003). However, Niranjanamurthy et al. (2013) identify several disadvantages of m-commerce: firstly increased security risks related to the less sophisticated operating systems on mobile devices, as well as accessibility issues, due to small screen size. Throughout this research, attention will only be focused on m-commerce in relation to e-commerce that is performed on a mobile phone through mobile apps, ignoring other forms of m-commerce on other mobile devices.

2.1.2 MOBILE APPS

There are two modes in which individuals can perform m-commerce transactions, either through the standard mobile web browser and accessing the mobile friendly version of a site, or through downloading and using a specific mobile application. Unlike performing m-commerce on mobile browsers, mobile apps only allow users access to that specific company's site. That is to say, whilst it is possible for an individual to browse Amazon, eBay and Nike websites

through their mobile web browser, by downloading the Amazon app, users will only have access to amazon.com.

Senn's m-commerce application framework (2000) categorizes m-commerce applications into three main categories: transaction management, digital content delivery and telemetry services (Table. 1). Furthermore, Senn divided these categories between two modes: passive applications and active applications. Active m-commerce applications are applications that require the individual to initiate the activity, by inputting, requesting and receiving information, whilst passive applications initiate action automatically without the individual's input.

	Applications	
Category	**Passive**	**Active**
Transaction management	Tolls / Automatic Updates	Shopping
Digital content delivery	E-Mail	Information browsing
Telemetry services	Interactive marketing	Appliance management

Table 1: M-Commerce Application Framework (taken from Senn, 2000, p.150)

When discussing m-commerce app activities we will describe any activity ranging from buying movie tickets, ordering food, banking and window shopping for clothes as m-commerce, if they are performed through the app and not the mobile site.

2.2 TECHNOLOGY ACCEPTANCE MODEL (TAM)

The 'Technology Adoption Model' (TAM) was developed to understand the causes that make individuals reject or accept new technologies (Davis, 1989). It is a further development on the previous model of behavior adoption, Fishbein and Ajzen's 'Theory of Reasoned Action' (1975).

Building on the TRA model, TAM acknowledges that an individual's intention to use a system, or behavioral intention, may not always directly respond to their usage behavior, due to volitional factors (Ajzen & Madden, 1985). Thus, when discussing factors that influence adoption behavior with TAM, we are discussing intended behavior.

TAM identifies two key factors that influence behavioral intention; these are Perceived Usefulness (PU) and Perceived Ease of Use (PEU) (figure 1).

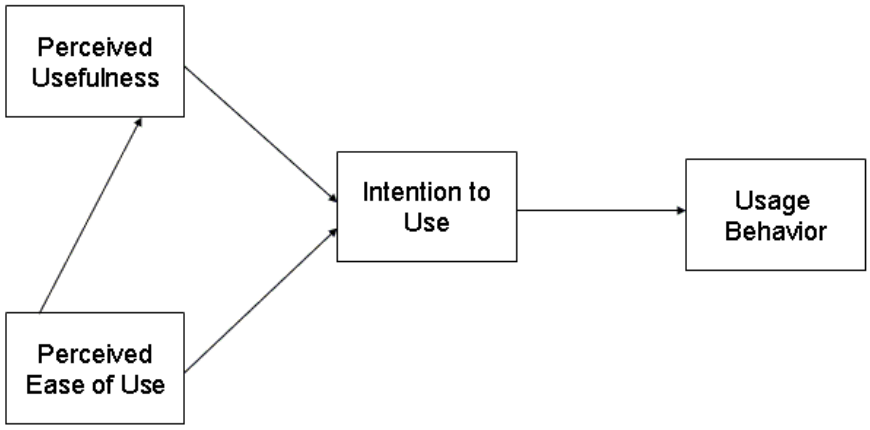

Figure 1: TAM Model (Davis, 1989)

Perceived Usefulness (PU) is defined as being "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p.320). Perceived Ease of Use (PEU) is defined as being "The degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p.320).

2.2.1 PERCEIVED USEFULNESS

The more useful a system is perceived to be for performing a job, the more positively it will affect an individual's intention to use the system. To better understand PU, Venkatesh and Davis (2000) expanded TAM into what they termed TAM2. TAM2 surmises that adoption rates of new technology is affected by social influence processes and cognitive instrumental processes.

2.2.1.1 SOCIAL INFLUENCE PROCESS

Social influence processes are made up of subjective norms, voluntariness and image.

Subjective norms presume that individuals follow the behavior of people that are important to them, even if the individual does not feel that the consequences of following that behavior are particularly favorable. Due to social pressures to adopt the new technology, an individual's perception of usefulness directed to that technology would strengthen (Venkatesh & Davis, 2000). Voluntariness is defined as the level of which an individual believes they have the freedom to choose to adopt a new technology, that is to say; is the adoption of this new technology mandatory or non-mandatory. The level of voluntariness of adopting a new technology will effect subjective norms, but have no direct impact on PU (Venkatesh & Davis, 2000). Finally, image refers to how useful a technology is in elevating an individual's social position within the group, if a new technology can greatly improve an individual's social standing then the PU of the technology will increase (Venkatesh & Davis, 2000).

2.2.1.2 COGNITIVE INSTRUMENTAL PROCESS

Venkatesh and Davis (2000) identify cognitive instrumental processes to be made up of job relevance, output quality and result demonstrability.

Venkatesh and Davis (2000) theorize that the perception of a new technology's usefulness will increase among individuals if they can identify it as being suitable for meeting the needs of their tasks; moreover, if the technology is not only suitable, but also produces output that is of high standard, then PU will increase. Ultimately, even if a new technology is effective at producing suitable, high quality results, but the end user is unable to attribute the positive results to the technology directly, then acceptance of the new technology will be negatively affected.

2.2.1.3 THE EFFECT OF EXPERIENCE

TAM2 states that experience will have a direct effect on social influence processes, but not on cognitive instrumental processes (Venkatesh & Davis,

2000). As a user gains more experience with a technology their reliance on subjective norms will weaken; yet, over time, image will stay the same unless group norms are changed. Conversely, experience will not have an effect on cognitive instrumental processes, and its significance in influencing behavior will remain the same.

2.2.2 PERCEIVED EASE OF USE

The difficulty involved in using a new technology will not only affect whether an individual intends to adopt the technology, but also how useful they perceive the technology to be. If a new technology is perceived as being useful, individuals may be willing to undergo some difficulty in learning to use the system. Conversely, if a technology is not perceived as being useful, no amount of simplicity will increase adoption rates (Davis, 1989). Ventaktesh's study into the determinants of PEU identify that an individual's PEU is made up of both anchors and adjustments (2000).

2.2.2.1 ANCHORS

Anchors come from an individual's general beliefs about a technology; they are hardwired into the individual and can be difficult to change, even as they are confronted with new, opposing information (Venkatesh, 2000). Anchors that influence an individual's PEU are computer self-efficacy, perceptions of external control, computer anxiety and computer playfulness.

Control and self-efficacy refer to how individuals perceive the availability of knowledge, resources or opportunities. If they feel they are limited to use a new technology due to their own lack of knowledge or by external pressures, then PEU will be negatively affected.

Computer anxiety is a strong independently held belief about an individual's own apprehension towards using computers. Even with increased exposure and experience with a technology, computer anxiety will continue to influence PEU (Venkatesh, 2000).

Computer playfulness is the final anchor that affects an individual's PEU. Venkatesh (2000) states that whilst PU is influenced by more extrinsic motivations, PEU is affected by more intrinsic ones. This suggests that computer playfulness is independent of the system and differs for each individual. The more playful an individual is towards computers, the more likely they will experiment with new systems, and have a more positive PEU. However, overtime and with more experience, playfulness will weaken (Venkatesh, 2000).

2.2.2.2 ADJUSTMENTS

Adjustments are beliefs held by an individual that change as the individual is confronted with new experiences and information (Venkatesh, 2000). These adjustments are made up of perceived enjoyment and objective usability.

As an individual becomes familiar with a specific system their level of technology knowledge and anxiety will change, either positively or negatively. These adjustments in knowledge and anxiety are referred to as objective usability.

Additionally, as experience increases with a system, an individual's general computer playfulness will adjust to be playfulness specifically relevant to that system. This adjustment from general computer playfulness to specific system playfulness is referred to as perceived enjoyment.

2.2.3 APPLYING TAM TO M-COMMERCE

TAM was initially designed for understanding technology acceptance in the work place, and over the years has been proven as a useful predictor of acceptance for a variety of new technologies, and e-commerce systems. In recent years researchers have also begun to show the relevance of TAM in predicting m-commerce adoption; ranging from the adoption of mobile news services (Chan-Olmsted, Rim & Zerba, 2013), mobile ticketing (Dyna & Purwo Adi, 2011), fashion shopping on mobiles (Ko, Kim & Lee, 2009) and m-commerce in tourism (Yang, Zhong & Zhang, 2013).

Pagani's study into the adoption of mobile multimedia services concluded that the two main influences for predicting the adoption of a new technology among

individuals were PU and PEU (2004). Their research shows that although there are differences amongst age groups on adoption, these two factors were still the most important aspects to consider. 31.3% of respondents between the ages of 25-34 ranked PU the most important factor for the adoption of mobile video messaging, and mobile email messaging, whilst 26.7% of respondents stated PEU to be their main influence (Pagani, 2004, p.54)

Research on the affect of anchors and experience in m-commerce adoption has also shown to support the models of Venkatesh and Davis (2000). Chan-Olmsted et al.'s research into the adoption of mobile news finds that past experience had an impact on rate of adoption (2004). Individuals who had past experience with mobile Internet were more open to the adoption of mobile news services. Similarly, individuals who had more experience using the radio to receive news over the newspaper were quicker to adopt the new technology. Furthermore, Yang et al.'s (2013) study into mobile travel booking supported the theory of the anchor influences on adoption rates. Their research concluded that if an individual had a high opinion of the use of a new technology before direct experience it will positively affect the adoption rates.

2.3 UTILITARIAN AND HEDONIC CONSUMPTIONS

Hirschman and Holbrook (1982) identified that the consumption experience is multi faceted and when examining why individuals behave in a particular manner we should expand our focus, from just examining the goal-orientated, utilitarian motivations, but also incorporate multi-sensory, hedonic motivations. The idea that individual motivations can be separated into utilitarian and hedonic behavior has been supported by several authors and applied into consumption activities for a variety of industries, in both the physical and online market (Childers, Carr, Peck & Carson, 2001; Moon & Kim, 2001; Cheong & Park, 2005; Wakefield & Whitten, 2006; Lu & Su, 2009; Liu & Li, 2011).

The utilitarian perspective assumes the buyer to be a logical problem solver (Sarkar, 2011). Utilitarian buyers are usually motivated by convenience, price, the ability to search for alternatives, and the ability to lower the irritation attached to shopping (Babin, Darden & Griffin, 1994; Childers et al., 2001;

Bhatnagar & Ghose, 2011). That is to say utilitarian shoppers derive no pleasure from shopping, it is a task to be completed, and their aim is to complete it as completely, quickly and painlessly as possibly.

On the other end of the spectrum, Hirschmann and Holbrok define the hedonic perspective as being behavior that relates to "the multisensory, fantasy and emotive aspects of product use" (1982, p.99). Hedonic buyers are usually motivated by the desire to satisfy their emotional needs, as well as their needs for playfulness. Hedonic shoppers derive pleasure from their shopping experience and aim to make their shopping experience as pleasurable and enjoyable as possible (Hirschmann & Holbrok, 1982; Babin et al., 1994; Bhatnagar & Ghosh, 2011; Ozen & Kodaz, 2012).

Several authors in the area of market research have conducted studies aimed at finding ways to identify and segment the market into utilitarian and hedonistic shoppers. Hirschmann and Holbrok (1982) stated that individuals learn their perspectives from their social class, ethnic groups and gender. This hypothesis has been supported by other researchers in this field, particularly in regards to ethnic group (Ozen & Kodaz, 2012), gender (Venkatesh & Morris, 2005; Yang & Lee, 2009) and household income (Dholakia & Uusitalo, 2002). Ozen and Kodaz's (2012) cross cultural study into online shopping, between American and Turkish consumers, incorporated Hofstede's cultural dimensions to conclude that more collectivistic cultures, such as Turkey, are more likely to produce hedonic shoppers who want their shopping experience to be sociable and enjoyable. Whilst more individualistic nations, such as U.S.A., produce more utilitarian shoppers, who are motivated by a simple and quick shopping experience. Yang and Lee's(2009) study into gender differences in using mobile data services concluded that men are more likely to be motivated by utilitarian perspectives, whereas women are more susceptible to hedonic behavior. Lastly, Dholakia et al.'s (2002) study into consumer characteristics found that families with at least one child under five years have higher levels of online hedonic shopper motivations.

2.3.1 TAM AND THE HEDONIC PERSPECTIVE

TAM has been predominantly work related, taking a utilitarian perspective and largely ignoring the influence of emotions and enjoyment on adoption rates. Yet, due to the complexity of technology acceptance, and the capriciousness of individuals, it is incorrect to bound TAM to just the utilitarian perspective (Davis, Bagozzi & Warshaw, 1992; Childers et al., 2001; Wakefield & Whitten, 2006; Lu & Su, 2009). With regards to the development on e-commerce and m-commerce attention has been placed on utilitarian factors; however, if we are to increase adoption of new technology, attention must also be turned to the hedonic factors of technology (Childers et al. 2001; Dholakia et al. 2002).

Authors have stated that TAM is still applicable for understanding adoption rates for hedonic technology, if we assume the perspective that hedonic technologies can still have utilitarian functions (Liu & Li, 2008; Jung, Perez-Mira and Wiley-Patton, 2009). However, authors have suggested expanding TAM to accommodate the hedonic perspective more fully, by including influencers such as perceived enjoyment, perceived playfulness and cognitive concentration on adoption rates (Davis et al. 1992; Cheong & Park, 2005; Wakefield & Whitten, 2006; Liu & Li, 2008; Lu & Su, 2009).

2.3.1.1 PERCEIVED ENJOYMENT (PE)

The Internet exists outside of the workplace, and there is a common understanding among researchers that TAM needs to be expanded to include other factors that aren't just usefulness and ease of use. Davis et al. identified this other factor as being Perceived Enjoyment (PE) that is, "the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences" (1992, p.1113). Perceived Enjoyment defined by Davis et al. (1992) differs from the Perceived Enjoyment as identified by Venkatesh. In Venkatesh's expansion on PEU, PE is identified as being the enjoyment a user receives for using a system to complete a task. Whereas from a hedonic perspective, Perceived Enjoyment is the general enjoyment a user gets from using a system, whether they need to complete a task or not.

When PE is used to compliment PU it can greatly affect the adoption of technology among users, although PE should not be considered as a substitute for PU, or as a greater influencer than PU on adoption (Davis et al., 1992; Cheong & Park, 2005; Wakefield & Whitten, 2006; Liu & Lu, 2008). If a technology is not perceived as being useful, no level of enjoyment will encourage an increased rate of adoption amongst users. Research has shown that PU is still the primary influencer for adoption in hedonic technology, followed closely by PE (Davis et al., 1992; Liu & Li, 2008; Yang et al., 2013).

2.3.1.2 COGNITIVE CONCENTRATION (CC)

In conjunction with PE, cognitive concentration must also be discussed when extending TAM to incorporate hedonic technology adoption. CC is the level of concentration or immersion an individual has when using a system (Wakefield & Whitten, 2006; Jung et al., 2009; Liu & Li, 2011).

The level of CC involved with a hedonic technology influences adoption amongst users; however its importance is not visible as an isolated factor. Other factors in TAM: PU, PEU and PE all have a larger role to play in influencing adoption rates (Wakefield & Whitten, 2006). Rather, the importance of CC lies in its relationship with PE, the more immersed an individual is in a system the more positively they will perceive the system as enjoyable thus increasing PU and adoption (Jung et al., 2009; Liu & Li, 2011).

2.3.1.3 PERCEIVED PLAYFULNESS (PPF)

Different from Venkatesh's utilitarian definition of playfulness as being the encouraging anchor that influences how positively an individual evaluates a new technology, PPF in hedonic systems is defined by Moon and Kim (2001) as being: how intrinsically enjoyable a system is to an individual, how curious individuals are while using the system, and how much attention is paid to the use of the system. Several authors have argued for the importance of PPF in the adoption of hedonic systems (Moon & Kim, 2001; Cheong & Park, 200).

PPF incorporates both PE and CC. That is to say, for an individual to find a hedonic technology as being playful they must identify it as not only being enjoyable and immersive, but they must also be curious in trying the technology.

PPF has been found to be one of the key predictors of adoption rates for use of a new hedonic system, outweighing the influences of PEU and PU in TAM (Moon & Kim, 2001; Cheong & Park, 2005; Wakefield & Whitten, 2006; Lu & Su, 2009). Moreover, PEU is seen as an antecedent of PPF, therefore although efforts should be made to emphasis the playfulness of new hedonic technologies to increase attitudes and adoptions rates among individuals, without having a system that is perceived as being easy to use this will ultimately fail.

2.4 COMPATIBILITY

Compatibility is originally derived from the Innovation Diffusion Theory by Rogers (2003), and is defined as "the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 2003, p.240).

Researchers have also combined compatibility with TAM to show how compatibility can have an effect on users adopting both e-commerce and m-commerce (Wu & Wang, 2004). Research combining compatibility with TAM has shown the significant influence that compatibility has over adoption rates. Wu & Wang's study into the main drivers of m-commerce adoption showed that compatibility can have a greater influence over adoption rates than PE and PEU (2004).

2.5 PERCEIVED RISK

Perceived risk (PR) can be defined as the negative outcomes and suffering of losses which individuals will experience from e-commerce (Liu & Wei, 2003, p.232). PR is seen as any kind of harm that an individual may experience from a technology, whether it is financial, social, or personal.

Perceived risk has been identified as a negative influence on adoption rates, the higher an individual perceives the risk associated with adoption, the lower the rate of adoption will be (Liu & Wei, 2003; Teo and Pok, 2003; Wu and Wang,

2005; Mallat, Rossi, Tuunainen & Öörni, 2008). Research has shown that with the purchase of goods through m-commerce PR is the strongest negative influencer among individuals, whilst with the purchase of services PEU still has a bigger impact (Liu & Wei, 2003).

2.6 CULTURAL DIFFERENCES

2.6.1 HOFSTEDE'S CULTURAL DIMENSIONS

Hofstede's cultural dimensions attempt to understand different cultures through several factors: Power Distance, Masculinity, Uncertainty Avoidance, and Individualism (1984). Although culture can be difficult to identify and define, and even though the manner in which Hofstede conducted his initial research may have several limitations, there is still value in using these cultural dimensions as a tool to better understand differing cultures (Ghauri & Cateora, 2010).

2.6.1.1 POWER DISTANCE

Cultures can be defined as either having a low or high power distance, referring to the level of hierarchy within a country. Countries with a high PD have clear hierarchies and power structures, where age and rank is respected, whereas societies with a small PD will strive for power equalization (Hofstede, 1984). It is common within cultures with a small power distance for status symbols to be viewed as being undesirable; rather equality is what individuals strive for. If superiority and power is to be displayed, it will be done so through achievements, and not through wealth and materialism.

2.6.1.2 MASCULINITY

Hofstede states that the factor of masculinity and femininity in cultures refers not to gender roles, but rather to the concept of "who am I?" (1984, p.84). Whereas masculine societies are mainly based on performance and material success, feminine societies are more focused on social welfare and improving quality of life among individuals. Masculine societies aim for recognition and social status more so than feminine cultures. Furthermore, in masculine societies individuals hold the belief that the more challenges an individual faces at work,

the higher their quality of life will be. Conversely, feminine societies strive to provide a more sociable working environment to improve quality of life.

2.6.1.3 UNCERTAINTY AVOIDANCE

According to Hofstede, in societies where UA is low, individuals will be more open to experiencing a higher level of discomfort. A lower UA indicates that individuals are more pragmatic and opportunistic. Moreover, members of society will not follow rules and standardization as closely, and are more acceptant of deviant behavior. Compared to societies with high UA, where centralization, and strict attention to rules and unwritten social codes are followed. Individuals from cultures with a lower UA will also be more unpredictable and enjoy a way of life that is much less structured, than those from a culture with a higher UA.

2.6.1.4 INDIVIDUALISM

Hofstede refers to this concept as individual's understanding of "I" and "We" (1984, p.83). Related to Maslow's hierarchy of needs, an individualistic culture will value their ego, and own self-esteem needs, above those of others. Whereas a collectivistic culture will strive for self-actualization as a group, as they value the need of belonging higher than the individual. As the terms suggest cultures with high individualistic traits are more independent than those who rank lower on the scale.

2.6.2 CULTURAL DIFFERENCES AND THE EFFECT ON TAM

The original TAM model was developed in the West, and has the potential to be skewed towards more western behavior. Several studies have shown that cultural differences impact adoption and attitude towards new technology, and efforts have been made to find a connection between cultural factors and the effect of the TAM model (Straub, 1994; Straub, Keil & Brenner, 1997; Straub & Rose, 1998; Ford, Connelly & Meister, 2003; Harris, Rettie & Kwan, 2005; McCoy, Galletta & King, 2007; Lee, Trimi & Kim, 2013). Although, not a lot of research has been done in adapting theory and creating models connecting TAM with Hofstede, past work have showed some recurring conclusions.

Straub's study into Japan and America's adoption of email in the early nineties showed that the influence of PU on adoption rates was not as effective as Japanese cultural values. Even though the Japanese identified that the use of email would allow them to be more productive at work, they still used fax machines for communication purposes due to nuisances in the Japanese written language that could only be expressed through the written word and not through digital text, this lead Straub to conclude "the benefits of the technological innovation will not offset the burdens of cultural change" (1994, p.39). Conversely, Straub and Rose (1998) identify that in the developing world, specifically several countries in the Arabic world, stressing the importance of PU and PEU will greatly influence BI amongst users.

Independent studies by Schaub, Keil and Brenner (1997), McCoy, Galleta and King (2007), and Lee, Trimi and Kim (2013) have identified key factors that will affect the success or failure of implementing TAM in specific cultures. Factors such as a low UA, high PD, high masculinity and high collectivism act as barriers that inhibit the TAM model from being effective. Countries with a strong UA are left unaffected by a technology's PU or PEU, since they still are more wary of new technology, and do not want to abandon the more traditional systems. PE and PEU do not affect BI in cultures with a high PD, McCoy et al. (2007) claim this is due to the fact that individuals in these cultures will listen to authority figures recommendations, whereas Straub et al. (1997) state in these cultures newer technology may not even be allowed to enter the market, due to the equalling nature some technology gives the population. Straub et al. (1997) theorize that masculine cultures will not be acceptant of new media due to the inability of individuals to show off their social presence, whilst McCoy et al. (2007) state that in these cultures PEU has no influence over BI, since masculine cultures produce individuals who are determined to achieve their own goals, regardless of ease of use provided by a technology. Similarly, in collectivist cultures, PEU has no influence over BI, since individuals are willing to suffer to accomplish goals that others values (McCoy et al. 2007). Moreover, collectivist cultures may not be open to adopt new technology due to the inability of technology to replicate desired group interactions.

2.7 THEORETICAL FRAMEWORK

Based on the adoption models and related constructs from the literature, we will present a research model that will be used to guide the rest of this research. Furthermore, this research model will be used as the basis for designing interviews and analyzing data.

2.7.1 RESEARCH MODEL

The research model used in this thesis is based on the Technology Acceptance Model (TAM) (Davis, 1989). Many researchers state that TAM needs to become a stronger model by building on the original two factors (Legris, Ingham & Collerette, 2003). Thus, we have combined TAM with four additional constructs that have been discussed as important determinants for mobile commerce adoption, including hedonic benefits, compatibility, perceived risk, and cultural differences (Figure 2).

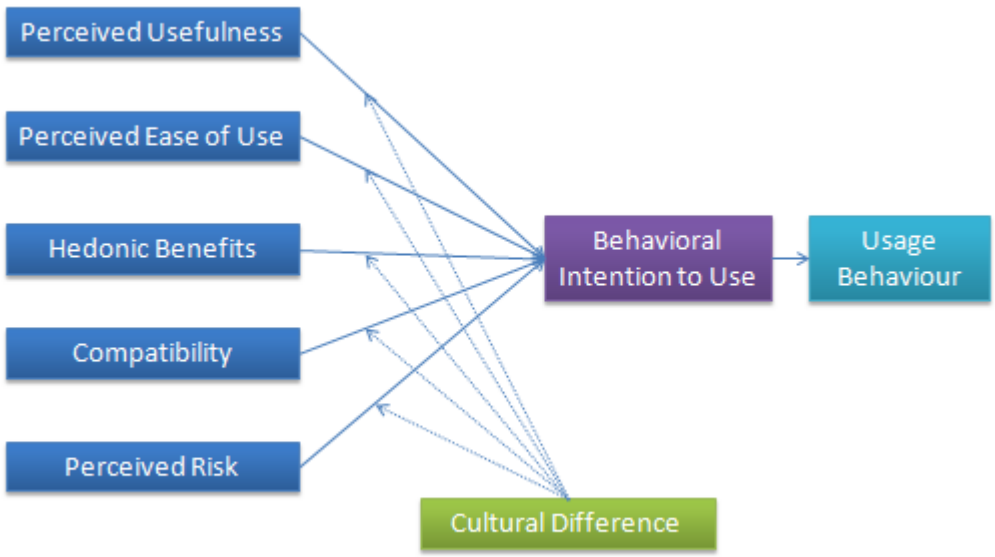

Figure 2: Proposed Research Model (Monno & Xiao, 2014)

2.7.1.1 PERCEIVED USEFULNESS (PU)

PU is one of the two fundamental determinants for users to accept technology in TAM (Davis, 1989). It is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p.320). In order to better understand PU, Venkatesh and Davis (2000) introduced three subsets of PU: social influence processes, cognitive instrumental processes and experience.

Throughout this research when referring to PU in our framework we will be following the original research and definitions from TAM (Davis, 1989) and TAM2 (Venkatesh & Davis, 2000).

2.7.1.2 PERCEIVED EASE OF USE (PEU)

PEU, also one of the original factors in TAM, is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p.320). To have a better understanding of perceived ease of use, Venkatesh (2000) identified the main determinants of PEU, which are an individual's "anchors" and "adjustments". Anchors come from general beliefs about the technology, and can be difficult to ignore. Even as new information becomes available anchors still influence PEU. Adjustments are beliefs that are changed over time as the user has direct experience with the technology. (Venkatesh, 2000)

Throughout this research when referring to PEU in our framework we will be following the original research and definitions from TAM (Davis, 1989) and Venkatesh's study into the determinants of PEU (2000).

2.7.1.3 HEDONIC BENEFIT

As TAM has been specifically designed for utilitarian motives, to help better understand hedonic motives we need to expand the model beyond the original two factors of PU and PEU. Therefore, in the above theoretical framework a factor called Hedonic Benefits has been included.

Hedonic Benefit incorporates past authors' extension of TAM to include hedonic shopping motives. The factors that incorporate our Hedonic Benefits are Perceived Enjoyment (PE), Cognitive Concentration (CC) and Perceived Playfulness (PPF).

2.7.1.4 COMPATIBILITY

Compatibility originally comes from Rogers IDT (2003), but has also been included into many authors research with TAM. Compatibility, as defined by Rogers, is the way that a technology is perceived as being consistent with a user's "existing values, past experiences and needs" (2003, p.240).

Throughout this research when referring to Compatibility in our framework we will be following the original definition from Rogers (2003).

2.7.1.5 PERCEIVED RISK

Perceived Risk is another fact that was over looked with the original studies of TAM, but has showed to be an important factor when examining adoption rates. PR is relevant for both utilitarian and hedonic shopping motives, and can be defined as suffering that a user may experience when using a technology, whether it is financial, social or personal.

Throughout this research when referring to PR in our framework we will be following the definitions from Liu & Wei (2003) that PR is any negative outcome that an individual may experience.

2.7.1.6 CULTURAL DIFFERENCES

The aim of this research is to understand why different cultures adopt m-commerce apps at different rates. To do this an examination of cultural differences has been added to our theoretical framework.

Throughout this research 'Cultural Differences' will be examined along the four original cultural dimensions as identified by Hofstede (1984): Uncertainty Avoidance, Power Distance, Masculinity, and Individualism.

CHAPTER 3 – METHODOLOGY

3.1 RESEARCH METHODOLOGY

We have assumed several research philosophies in our aim to collect data on the differences between m-commerce adoption rates among European and Asian consumers. Firstly, we will be observing the nature of reality from a relativist ontological standpoint, that is to say we are of the belief that there is no single truth to be discovered about the world from our research, but rather multiple truths (Easterby-Smith, Thorpe & Jackson, 2012). Depending on the individual, their experiences and their background, their view on the world will change. When performing a cross-cultural examination on consumer behavior we find that taking a relativist ontological stance will allow us to appreciate the effects of cultural differences on consumer's belief about reality. As supported by Collins (1983, in Easterby-Smith et al., 2012), truths will vary from place to place, and what may be relevant and true in the Asian market may not hold true in Europe.

The method in which researchers explore the nature of reality is often termed as epistemology. We believe that from a hermeneutical phenomenology it is important to take a constructionist approach to research, where we do not approach understanding reality from objective methods, but rather through a more subjective process (Easterby-Smith et al., 2012). The most important aspect of understanding the reality of the world is through what the individual experiences, this reality is internal and cannot be understood through mere observations (Kvale, 1996). The hermeneutical approach is interpretive, and, as stated by Laverty, "concentrates on historical meaning of experience and their development and cumulative effects on individual and social levels" (2003, p.15). Historical meaning comes from an individual's background, which includes what is given to an individual from their culture to help them understand the world (Koch, 1995). This approach is key for us to examine the reasons for why adoption rates are different between the two markets; we are taking the stance that since technological, political and legal factors are similar in both markets, it must be a cultural factor that is responsible for individuals differing motivations when adopting m-commerce applications.

3.2 TYPE OF RESEARCH

To better understand the problem of why adoption rates of m-commerce apps are different within the Asian and European markets we will be performing an exploratory study (Saunders, Lewis & Thornhill, 2009). Previous research into this field has focused on what aspects of TAM have the strongest influence on adoption rates in different countries; however, research into why certain factors have a stronger influence on adoption is scarce (Niranjanamurthy et al., 2013). McCoy et al. (2007) and Straub et al. (1997) hypothesize several reasons why specific factors of TAM may be more effective in different cultures, but these hypotheses come from quantitative data and do not explain what these differences are and why they occur, only identifying that there are differences between TAM and various cultures and creating hypothesis from their quantitative results.

Through an exploratory research we therefore aim to analyze the problem in greater detail and try to determine the critical issues behind why this problem occurs (Burns & Bush, 2003; Sreejesh, Mohapatra & Anusree, 2013). This research aims to discover why adoption rates are higher in the Asian market than the European market. Furthermore, through this exploratory study we hope to provide insights on how m-commerce application adoption can be increased within the European market to be more equal to that of the Asian market.

Our exploratory research design, combined with our philosophical perspective will guide the rest of our methodology.

3.3 RESEARCH STRATEGY

When conducting research, and data analysis two forms of research strategies can be used: quantitative and qualitative research. Quantitative research is a research strategy that emphasizes numerical collection and analysis of data. This research strategy takes a positivist approach to natural sciences and belongs to objectivism for ontological considerations. On the other hand, qualitative research places emphasis on words and belongs to interpretivism in epistemological orientation and constructionism in ontological orientation (Bryman & Bell, 2011, p.27).

Ghauri and Grønhaug (2002) state that the decision for which research strategy to undertake depends on the research question, and purpose of the research. In order to answer our research questions and reach the purpose of this research, we decided to apply a qualitative research strategy to grasp a deeper understanding of the differences of m-commerce app adoption rates between the European and Asian market, and to look for the relationship between cultural differences and consumer adoption behavior of m-commerce apps. Qualitative research strategy is used when there is a concern on understanding how things happen and how they are related, rather than measuring the relationship of different variables. Qualitative research is able to study individuals, their experience and their life world. It is a useful method for describing, analyzing and understanding the behavior of individuals in their environments (Ghauri and Grønhaug, 2002). By performing qualitative research, we aim to build on the previous quantitative research of authors who identified that differences do exist between TAM and different cultures, but did not fully reveal what and why these differences occur.

Qualitative research has been criticized as being "too subjective", "difficult to replicate", "hard to generalize" or "lacking in transparency" (Bryman & Bell, 2011, p.408). However, as defended by Goulding, "the last two decades have seen a steady increase in the number of qualitative papers appearing in the premier journals, it is fair to say that qualitative research is no longer viewed as merely 'speculative', or 'soft', as was generally held to be the case by many in the past" (2005, p.294). Furthermore, Goulding (2005) mentions the importance qualitative research holds among academics and marketers when aiming to gain valid insights on a particular field.

3.4 RESEARCH DESIGN

Research design is defined as a plan of research that leads the research to achieve a particular goal (Denscombe, 2010). It also represents "a structure that guides the execution of a research method and the analysis of the subsequent data" (Bryman & Bell, 2011, p.41). Compared with different research designs, we decided to use a survey design in this research (Bryman & Bell, 2011). Denscombe states, "when something is surveyed, it is viewed comprehensively

and in detail" (2010, p.11). Surveys attempt to describe what is happening, what people believe, and to learn the reasons for a particular activity. In line with our philosophical approach, we see the value in conducting a survey design to better understand the motives and behavior of European and Asian consumers when adopting m-commerce apps, and to discover the meaning behind these differences.

There are several forms of survey designs. Due to the limitations of time and cost, we believe that it would be beneficial to conduct face-to-face surveys in European markets and telephone surveys in Asian markets. Through face-to-face surveys, we can get a better sense of whether respondents are truly expressing their beliefs and opinions, more so than if the survey was collected through post or email. Furthermore, as researchers, we can also use interpersonal skills to encourage respondents to take part in the survey (Denscombe, 2010). By conducting telephone surveys with Asian respondents, we can achieve direct contact with interviewees on the opposite side of the world. Furthermore, a positive aspect of telephone surveys is since personal characteristics cannot be expressed through the phone and the fact that the interviewers are not physically present can offset the likelihood of respondents' answers being affected by the interviewer (Bryman and Bell, 2011). Through a combination of these two survey methods researchers will continue asking questions until respondents give enough responses that are required, allowing us to fully explore the respondents world view (Denscombe, 2010).

The main focus of our survey is concerned with adoption behavior of m-commerce apps in both the European and Asian market. We will carry out surveys in four countries: UK, Sweden, China and South Korea. The authors of this paper both have experience living in these four countries and preexisting connections with potential respondents, which creates convenience with sampling and analysis of data.

Due to our resources and time being limited, we understand that the findings of our survey may not be useful for making generalizations about entire countries and continents. However, it will provide a good starting point for allowing us to

describe the reasons for differences of m-commerce mobile app adoption behavior between European and Asian consumers.

3.5 RESEARCH METHOD

Due to our philosophical approach to research we believe interviews to be the most appropriate method of data collection. Our constructionist epistemology states that reality does not exist externally, but rather comes from within the individual (Easterby-Smith et al., 2012), therefore the best way gain an insight into these realities is not through an ethnographic approach, but rather through the exploration of natural language. As Kvale (1996) states, there is no standard approach to interviewing, but rather the interview should be designed to best suit the requirements of the research. We have opted to conduct semi-structured interviews for the purpose of our research, as it will help us better explore the beliefs and motives of our respondents, and discover new insights into why differences occur between adoption rates. Our semi-structured interviews will be built around an interview guide to help with later analysis of results.

We have opted for performing semi-structured interviews due to practical and philosophical reasons. Firstly, our reasoning for taking a semi-structured approach to interviews comes from our hermeneutical phenomenology. We want to understand the respondents life world, to know what are the differences between individuals from the Asian and European market, and specifically why do these differences exist. To truly understand an individual's life world, and get a sense of why they adopt m-commerce apps, we need to probe deep into their experiences and beliefs, by asking very open-ended questions, and trying to get the individual to lead the conversation (Laverty, 2003). As stated by Wilson and Hutchinson (1991), by asking very open-ended questions we will be able to uncover everything about the individual's life world, even aspects that seem trivial, but may in fact hold a key to understanding differences between cultures.

Secondly, due to the fact that more than one person will be involved in coducting the interviews, we have chosen a semi-structured interview approach to allow for an easier comparability of interview results (Bryman & Bell, 2007). Interviews with British and Swedish respondents will be done in their respective

countries, independently by each researcher. Moreover, interviews with Chinese and South Korean respondents will be performed over Skype, with interviews with respondents in China done in Chinese, and interviews with respondents from South Korea, performed in English. Additionally, two different interview guides have been designed for respondents who have and do not have experience using m-commerce apps.

Finally, although interviews will be kept as open ended and interviewee led as possible, the nature of our research question requires us to utilize an interview guide (Kvale, 1996; Bryman & Bell, 2007). We have proposed a framework to help answer our research questions and better understand how and why individuals from different cultures adopt m-commerce applications at different rates. Our model is based on the five key factors that will affect whether an individual will adopt m-commerce applications. These five key factors will be used to guide our interview, and questions will be asked around these themes (Table 2).

The interviews will be performed through a laddering technique (Easterby-Smith et al., 2012). We will open up each topic with a question specifically aimed at discovering the "what" aspect of our research question, and build upon the answers respondents give to discover the "why".

Interviews will be approached from a romanticist's perspective with the aim of creating a genuine human interaction where interviewees are able to fully express their life world, rather than give straightforward responses to our questions (Alvesson, 2003). For this approach to be successful our interviews will be designed around obtaining trust and creating a laidback setting for interviewees. Prior to the interview all respondents will be briefed on what to expect; that is that they will be recorded, that the recordings will not be played or shown to other parties, and how the responses they give will be used for the purposes of this research. If the interviewees have any concerns regarding security, they will be given the option to remain anonymous, or can refuse to be recorded. Similarly for South Korean and Chinese respondents, all interviews

will be performed through Skype, with the option for respondents to choose to have the interview be performed through video call, or voice call.

THEME	TOPIC	EXAMPLE QUESTION
Perceived Usefulness	Subjective Norms Social Image Cognitive Instrumental Process	*"Do your friends give you recommendations on what apps to download?"*
Perceived Ease of Use	Control & Self-Efficacy Anxiety	*"Do you feel safe buying stuff on your phone?"*
Hedonic Benefit	Perceived Enjoyment Cognitive Concentration Perceived Playfulness	*"Whenever you're bored do you ever get your phone out and start window shopping?"*
Compatibility		*"Do you think mobile shopping could ever replace physical shopping for you?"*
Perceived Risk		*"Do you notice any major risks when shopping through apps?"*

Table 2: Interview guide based on Theoretical Framework

3.6 SAMPLING

Unlike when performing quantitative research, qualitative research samples are convenience based and opportunistic, since qualitative research aims to generate an in-depth analysis (Bryman & Bell, 2011, p.489). For our research, snowball sampling will be used, this allows us "to contact groups of people for whom there is no sampling frame" (Bryman & Bell, 2011, p.491). Saunders, Lewis and Thornhill also mention that snowball sampling can be used "when it is difficult to identify members of desired population" (2009, p.240), such as all m-commerce users from European and Asian markets in this research. What's more, snowball

sampling is an effective technique for building up a reasonable sample size (Denscombe, 2010).

The first group of interviewees will be friends and colleagues who we know do or do not have experience of using m-commerce apps in their daily life. They will be asked to recommend some of their friends and colleagues who have the same experiences as them of using m-commerce apps. Thus, the researchers can use the recommended respondents as a reference to enhance the original sample selection's credibility (Denscombe, 2010).

As stated by Marshall, "An appropriate sample size for a qualitative study is one that adequately answers the research question" (1996, p.523), thus when deciding upon a relevant sample size there is no golden number. Denscombe (2010) suggests three approaches to calculating sample size: statistical, pragmatic and cumulative. The statistical approach is suited to large-scale surveys and probability sampling techniques. The pragmatic approach is a good way to conduct smaller-scale surveys with low costs and difficulties. However, in our research, we will use a cumulative approach, as our sample size calculation method is associated with small-scale, qualitative research. "The cumulative approach is one in which the researcher continues to add to the size of the sample until a point is reached where there is sufficient information and where no benefit is derived from adding any more to the sample" (Denscombe, 2010, p.40).

One disadvantage toward using snowball sampling is the potential for bias, particularly in regards to the interviewees selecting respondents with similar thoughts and experiences to themselves (Saunders, Lewis and Thornhill, 2009). However, it must be noted that performing research in the field of natural science, researchers do not have the luxury of remaining completely objective. Even if we were able to remain unbiased in our sampling methods, the analysis and interpretation of the data would still show the influence of the researchers.

In all, 15 respondents were interviewed from four countries, with respondent's ages ranging between 22 – 33 years old. Table 3 is a summary of the profiles of our respondents.

Country	Name	Gender	Age	Brand	Main App
UK	Donato Checchia	Male	29	Google	Amazon
UK	Elisa O'Brien	Female	25	Samsung	Just Eats
UK	Joanna Anderson	Female	30	Apple	Amazon
Sweden	Ellen Persson	Female	25	Samsung	Tradera
Sweden	Johan Whlfahrt	Male	24	HTC	Blocket
Sweden	Nistiman Yilmaz	Female	22	LG	WyWallet
China	Xiaochen Liu	Female	25	Apple	Mobile Taobao
China	Yue Teng	Female	30	Apple	Mobile Taobao
China	Huiyan Wang	Female	25	Apple	Mobile Taobao
China	Peng Zhou	Male	33	Apple	Mobile Taobao
Korea	Hobin Han	Male	30	Samsung	Korea Rail
Korea	Hyojin Bae	Female	31	Apple	Air BnB
Korea	Nahyoung Kim	Female	27	Samsung	Interpark
Korea	Gyongju No	Female	25	Apple	Kakao Style
Korea	Cheongrack Ryu	Female	28	LG	Interpark

Table 3: Information of respondents

3.7 DATA ANALYSIS

Our research is being guided throughout by the theoretical framework designed in the previous chapter. The framework was used in the interview process as part of the interview guide, as well as helping the analysis. Prior to conducting our interviews, questions were divided into five categories; Perceived Usefulness, Perceived Ease of Use, Hedonic Benefits, Compatibility and Perceived Risk. Responses to these questions were transcribed and then placed into the relevant category. Each category was further divided into subcategories as seen in table 4, overall there are five categories, and a further eight subcategories.

Interviews were recorded using the interviewer's mobile device, and transcriptions of each interview were typed by hand into a word document for analysis. In the case of interviews with respondents from China, interviews were first translated and then transcribed into English.

To aid in the creation and understanding of each category and subcategory, memos were utilized throughout the analysis (Bryman & Bell, 2011). Although the use of semi-structured interviews had allowed for simple categorization, due to our philosophical orientation and laddering approach to performing interviews, transcriptions became large and exhaustive. The use of memos allowed for us to keep track of concepts and ideas during the analysis process, and helped us reflect on the data we had collected (Bryman & Bell, 2011). Furthermore, by producing memos for each category it was easier for both researchers to share and discuss their results. Table 4 is an example of memo used whilst transcribing interviews from a UK respondent.

Results were analyzed using Hofstede's original four dimensions: Power Distance, Individuality, Masculinity and Uncertainty Avoidance. Hofstede's cultural dimensions are dynamic and constantly change as further research is performed in the field of cultural studies. The figures of each nation's ranking on these four dimensions were taken from the official Hofstede website as accessed in May 2014. See appendix 1 for a breakdown of each four country's cultural dimension rankings at the time of analysis.

Category	Subcategory
Perceived Usefulness (PU)	Subjective Norms
	Social Image
	Cognitive Instrumental Process
Perceived Ease of Use (PEU)	Self-Control & Efficacy
	Anxiety
Hedonic Benefits	Perceived Enjoyment (PE)
	Cognitive Concentration (CC)
	Perceived Playfulness (PPF)
Compatibility	
Perceived Risk	

Table 4: Categorization of data analysis

Perceived Usefulness (PU)
Social Image
Interviewer: Even if they said that everyone is using it? **Respondent:** Na. You see, personally if everyone is using it, I would just ignore it completely. **Interviewer:** Why? **Respondent:** I dunno, probably because everyone is using it.
This was quite an interesting response to receive during the conversation; the respondent suggested that he felt that by following the trend and doing what everybody else is doing it would negatively affect their image. Therefore, it could be said that social image does have an impact on the whether an individual uses an app. But rather that an individual downloads an app because they don't want to be seen as out of the loop, this individual is making an effort to not use the app because they won't be able to show off their individuality.

Figure 3: Example of memo from transcribed interview

3.8 RELIABILITY AND VALIDITY

Based on Denscombe (2010), reliability and validity of research needs to be considered and evaluated, as it can have a critical impact on the integrity and quality of our research. As Saunders, Lewis and Thornhill (2009) state, the aim of stressing reliability and validity is to reduce the possibility of getting the answer wrong.

"Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings" (Saunders, Lewis and Thornhill, 2009, p.156). In order to strengthen the reliability of the research

design, we conducted face-to-face surveys and telephone surveys as both approaches were appropriate for the purpose of this study. Due to personal involvement in the face-to-face and telephone surveys, respondents were able to clear up and eliminate any confusion that may have had (Denscombe, 2010). Thus, these two types of survey research designs contributed to the reliability of this research. Considering the reliability of the research method, all of the interviews were recorded and transcribed into written form, improving the reliability of all data from interviews. Furthermore, the respondents were recommended by each other, which helped to strengthen the reliability of the respondents and also the results of these interviews (Denscombe, 2010).

"Validity is concerned with whether the findings are really about what they appear to be about" (Saunders, Lewis and Thornhill, 2009, p.157). The accuracy and precision of data is closely related to the validity of the whole research (Denscombe, 2010). In order to have accurate and effective data, an interview guide was designed for the semi-structured interviews that were based on our theoretical framework. Interviews were conducted in a quiet environment to ensure the recorded conversations were clear when played back. After transcribing the recordings, all data was verified by informants to make sure interviewers had received the correct information (Denscombe, 2010).

CHAPTER 4 – ANALYSIS

4.1 EUROPEAN MARKET ANALYSIS

4.1.1 PERCEIVED USEFULNESS

4.1.1.1 SUBJECTIVE NORMS

> *"Well, if I get a recommendation I will look it up, but it won't really matter if a friend says to me "check this app". Because, if it's something I'm not interested in I'm still not going to use it."*
>
> *Elisa O'Brien (UK)*

A common feature between both UK and Swedish respondents was the lack of influence peer recommendation had on the individuals desire to use an app. Many UK respondents stated that although they took into account the advice of their peers, ultimately it came down to their own individual choice. There was no indication that respondents from the European market were willing to follow the behavior of their peers and use an app if they saw no personal value in it. Interestingly, amongst Swedish respondents, several interviewees stated never receiving any recommendations from their peer group about using an app, with interviewees stating that they were not aware if their friends used the same apps as them.

> *"No. I just downloaded because I have previous experience of using the website and I saw they have an app and downloaded it to try."*
>
> *Johan Whlfahrt (Sweden)*

> *"I was just Googling for training apps, and then this came up"*
>
> *Donato Checchia (UK)*

With peer recommendations having little influence over European respondents, many interviewees stated that the reasons why they adopted an app were down to their own individual discovery. Respondents either went out of their way to search for a particular app on their own, or based on past e-commerce experience become aware of the app. The desire for consumers to adopt apps through their own individual discovery led to a variety of different apps being adopted within European social groups. UK respondents spoke about how

members of their social group would have varied preferences on what apps to use to perform a task, whilst some friends would use Just Eats to order takeaway, others would want to use Hungry House, there was a clear lack of agreement among peer groups about what was the best app to use. On the other hand, our Swedish respondent said they had no idea, and no interest in knowing what apps their friends were using.

4.1.1.2 SOCIAL IMAGE

> *"I think it's pretty neutral. Neither negative nor positive."*
>
> *Johan Whlfahrt (Sweden)*

Our interviews with Swedish respondents showed that apps had little effect in leaving a strong impression on their social image. Findings among several respondents showed the lack of influence social image had on adoption for Swedish consumers. Using apps was seen as "mainstream" and something that usually happens, therefore whether you used an app or not had no impact on you social standing.

> *"I think if another one of my friends would say "don't call, we can just use the app", and I would feel like an idiot for not thinking of that."*
>
> *Elisa O'Brien (UK)*

In comparison, UK respondents took a more extreme view on apps. UK respondents believed that because the use of apps was so widespread and mainstream in society the fact that you used an app had no effect on your social status; however, if you showed an inability to understand or use apps that would negatively influence your social image.

> *"Nah, you see, personally if everyone is using it I would just ignore it completely."*
>
> *Donato Checchia (UK)*

Furthermore, in another situation one UK respondent showed that by not using an app he could make a bold statement about himself. The respondent understood that even if an app were beneficial for him, he would refuse to adopt it completely and not use it based on the idea that he did not want to be seen as following the crowd and rather wanted to bring across his uniqueness.

Supporting the finding that by not adopting m-commerce had a larger influence on UK consumers social image, than adopting an app.

4.1.1.3 COGNITIVE INSTRUMENTAL PROCESS

> *"You don't have to go downtown and you don't need to wait for the shop to be open. You can do it at 3am if you want, it's a lot easier."*
>
> *Nistiman Yilmaz (Sweden)*

Both UK and Swedish respondents spoke about the ability of m-commerce apps to allow them to shop without the limitations of time and space. The freedom that m-commerce apps provided European individuals was seen as major influence over whether they would adopt an app, and whether they would use it over other forms of e-commerce. Several times throughout the interviews respondents made comparisons between the portability of laptops compared to phones, and the suitability of using apps over websites in certain situations.

> *"Instead of using Hotels.com, if I book through the TopCashBack app and there is a 10% discount or 8% discount."*
>
> *Joanna Anderson (UK)*

There seemed to be confusion among European consumers about whether m-commerce apps provided good value. Many respondents spoke about how using an app added a "middle man" or an "extra step" to the process and as such if you were ordering a meal, or buying a ticket through an app it would cost you more. However, other respondents described particular apps they were aware of that actually provided discounts. Our responses showed that individuals in the UK and Sweden could not agree on whether m-commerce app shopping provided good or poor value for money.

> *"I think people more enjoy the actual feeling of stuff when they buy it. And you want to see what you buy."*
>
> *Nistiman Yilmaz (Sweden)*

The lack of sensory stimulus was seen as a common problem for respondents from the UK and Sweden. For these individuals, app shopping, similar to online shopping, could not replicate the sensation of feeling, smelling and trying and

item before you make a purchase. For Swedish respondents they spoke about how they wanted to feel and try the clothes they were buying, and clothes shopping apps could not provide them with this sensation. Whilst UK respondents stated that they had no problem buying clothes without touching them, if it came from a shop that they frequented regularly. However, their main concern was in grocery shopping through an app, since they had no way of touching and knowing the freshness of the produce.

> *"So we searched while we were walking and they didn't have it, so what's the point? It's just easier to buy it on Amazon… I'm not going to waste time going around searching for it."*
>
> *Donato Checchia (UK)*

Saving time was an important factor when download an app for our European respondents. The ability to quickly find or pay for an item was a key motivation in m-commerce app adoption. Individuals described not wanting to waste time searching stores for an item that can instantly be ordered online. Similarly, if users were busy and had to take a quick lunch break, the instrumentality of apps to allow them to pay for items without having to queue was a major positive. One UK respondent mentioned they had stopped using a particular app for shopping because the speed of the app had slowed down, even though the other instrumental processes had remained the same, because the app was no longer allowing the respondent to save as much time as before she removed the app from her phone.

> *"So I just want to see new stuff, so like oh they have got that, let me go and check it out."*
>
> *Elisa O'Brien (UK)*

For UK respondents the use of m-commerce shopping apps was seen as a useful method for browsing items and trend spotting. UK respondents explained how they would have clothes store apps on their phone so that they could see what was new in stock, rather than having to go to the store every week and browsing the selection for new items. These apps would not necessarily be used to make purchases, but rather for information gathering.

4.1.2 PERCEIVED EASE OF USE

4.1.2.1 CONTROL & SELF-EFFICACY

> *"I have experience of using online shopping, so it is pretty easy for me."*
>
> *Ellen Persson (Sweden)*

A common response from our European interviews was that individuals felt confident in using m-commerce apps. Consumers had past experience using online stores on their PCs, therefore using apps was not any more difficult for them. Respondents described m-commerce app shopping as a simple activity, and one individual complained that they became annoyed when apps had too many tutorials because it was unnecessary and slowed down the process of shopping.

> *"The thing is the connection here is quite bad, but if I had a good connection I would use my phone"*
>
> *Donato Checchia (UK)*

A major obstacle for European individuals, when using m-commerce, were external forces. For UK respondents based in London, the issue of lack of Internet connectivity on the underground rendered m-commerce apps useless when commuting. A common problem shared by both respondents from Sweden and the UK was that they felt the infrastructure was not in place to support m-commerce app shopping. Even if the app was perfect, the delivery of their purchases would cause problems, either by being too slow or too expensive.

4.1.2.2 ANXIETY

> *"I would only do it with something that I knew though, so with a company that I actually trust. If I found out about a new company, I wouldn't necessarily use their app to buy things… I would trust their app, if I knew it was an official one and I'd use that. But anything relatively new I'd be a bit apprehensive of putting card details in."*
>
> *Joanna Anderson (UK)*

Lack of trust was a major issue for both UK and Swedish respondents. For Swedish respondents it was difficult to trust any kind of app as they felt companies were asking for too much personal and financial information, for

instance wanting to enable GPS when using an app. When given the choice between app shopping and PC shopping, Swedish respondents trusted websites much more than apps. Similarly, UK respondents said they had apprehensions with trusting m-commerce apps. For UK individuals, if an app was official or developed by a company that the individual had positive previous experience with then they would not be anxious handing over personal information. However, if the app was new, or if the company was young, UK respondents, like Swedish respondents, would not trust the app with their personal information.

> *"I think it always goes back to not knowing if it will be legit, like not knowing if it is going to happen, or what is going to happen. Am I going to get a confirmation email, and easily will I get an update on it."*
>
> *Elisa O'Brien (UK)*

European respondents showed that they were apprehensive to adopt m-commerce apps because of concerns about a lack of support. Respondents wanted to know that companies were going to update their apps frequently to keep them safe and running smoothly, and they wanted assurance that they would receive help if anything went wrong with their transactions. Particularly for UK respondents, individuals were not worried that things might go wrong with making purchases on apps, but that when things did go wrong the companies wouldn't support them. One respondent gave the example of why they no longer use a particular app for ordering takeaways; on one occasion when they ordered through the app, they waited for an hour for their food and when it still had not arrived, they called up the restaurant directly, only to hear the owner tell them that they never received their order through the app. The individual explained that they stopped using the app to order meals, not because if failed to complete their order, but rather because it never informed them of the failure or explained to them why it failed, the individual felt ignored by the lack of support.

4.1.3 HEDONIC BENEFIT

4.1.3.1 PERCEIVED ENJOYMENT

"So if I enjoyed shopping more, I just wouldn't use it."

Elisa O'Brien (UK)

"I don't really have enjoyment from going to the shops, and looking around…. if I order something I like through an app, without the stress of having to get things done quickly, and getting things out of the way."

Donato Checchia (UK)

"I don't think I would do window shopping by phone. It feels doesn't have much fun."

Ellen Persson (Sweden)

European consumers stated that they did not perceive enjoyment from m-commerce apps. UK respondents explained that they didn't enjoy physical shopping as they found it to be too crowded, confusing, stressful, and time consuming. Since app shopping removed a lot of these annoyances individuals chose to shop on their mobile device. However, m-commerce app shopping was not perceived as more enjoyable, instead it was perceived as being less annoying. Respondents stated that if they did enjoy shopping, they certainly would not use m-commerce apps as frequently. Conversely, Swedish respondents spoke about the enjoyment they received from physical shopping and how mobile apps were unable to replicate that enjoyment.

4.1.3.2 COGNITIVE CONCENTRATION

"I'm using the "Blocket" once per day. Maybe just five or ten minutes."

Johan Whlfahrt (Sweden)

Both UK and Swedish respondents used apps on a regular daily basis, although mostly no more than twice a day if they did not need to perform a specific activity. Once an app had been downloaded by a user it was not being forgotten, but regularly checked. Respondents told us that they would not spend too long each time they checked their app, spending on average ten minutes to see what was new and if there was anything they would like to buy. The longest response

came from a UK respondent who said they used their grocery-shopping app for 40 minutes whenever they did their weekly shop.

> *"Less about actively having to do anything, I'm just doing it to pass the time"*
>
> *Elisa O'Brien (UK)*

Although respondents were using apps quite frequently, they were not immersed in the experience. Many individuals from the UK and Sweden spoke about using the app as a "distraction", something to "pass the time" and therefore did not require a lot of effort, they were checking their apps in class, or whilst walking home and were not fully concentrating on the activity of browsing or shopping. This was ideal for respondents who did not want to dedicate a lot of their energy into using an app.

4.1.3.3 PERCEIVED PLAYFULNESS

> *"Yes, I would like to know someone using it, because I don't know much about."*
>
> *Ellen Persson (Sweden)*

> *"I don't know. That's a good question. Literally, now that you've mentioned it to me, I would most probably look it up."*
>
> *Elisa O'Brien (UK)*

Curiosity about apps existed among European respondents, individuals showed an interest in wanting to learn and try new apps so that they could get a better idea of its functionalities. The problem occurred when respondents felt that their curiosity was not being well supported. Several times when conducting interviews with UK respondents individuals would talk about an app function they would like to see, only to realize that this app may already exist and they didn't know about. At other times, when asked about whether they used the app of their favorite store, many respondents had a sudden realization that they didn't even know if their favorite store had an app, but it would be a great idea to download it. Similarly, Swedish respondents showed an interest in a variety of m-commerce apps they would like to try, but had no way of learning about them since no one talked about apps in their peer groups. Our interviews showed that

curiosity existed among European consumers, but without external encouragement this curiosity would not be acted upon.

4.1.4 COMPATIBILITY

> *"I guess it is because I don't use, like with cinema tickets, I don't go to the cinema that much, so I guess unless you do stuff a lot, like maybe on a daily basis, or weekly basis you won't need that ease. You'll just be like, "well I don't go on that website that much", it would have to really hit you and be like, hang on why am I logging in all the time, I might as well get the app. I think it has to get to that stage for me. It has to mirror what you do on a day to day basis."*
>
> *Elisa O'Brien (UK)*

Most European respondents spoke about how certain apps were not necessary to their daily life. The above comment shows that although apps can make purchases cheaper and easier for the consumer, the individual still was not motivated to download and use the app if it was for a purchase they made daily. Respondents showed that they would adopt an app if it helps with frequent purchases; otherwise they have no problem sticking with the traditional methods. Apps should complement the individual's lifestyle and their habits, and UK and Swedish respondents were not open to adapting their lifestyles to incorporate new m-commerce apps, regardless of how useful they may be.

> *"All I need it to do is to buy bus tickets."*
>
> *Nistiman Yilmaz (Sweden)*

Moreover, European respondents were concerned with the specificity of the app before they chose to adopt it. Interviewees didn't need their app to perform multiple tasks, but preferred m-commerce apps to specialize in one specific task. European individuals preferred to have a specific app for each task they did, rather than using an app that could perform a variety of actions.

> *"And with food, I could use apps, but I don't really do weekly shops or anything, I just shop when I need to on the day, so it wouldn't really be beneficial."*
>
> *Elisa O'Brien (UK)*

A key difference between UK and Sweden respondents was that UK respondents were much more spontaneous shoppers. UK respondents did not like to plan too

far ahead and would make quick decisions. Respondents from the UK spoke about how grocery apps were not useful for them since they did not want to plan their meals for the whole week and would rather decide on the night what they were going to buy and cook. Another respondent said that they do not have any clothes store apps since they were worried that they would spend too much money on clothes they didn't need, because they would be too impulsive. Whilst another respondent mentioned that they make a lot of their decisions while they were out and couldn't wait to return home to make the purchase on a website.

4.1.5 PERCEIVED RISK

> *"It must be safe to pay. It should have security functions. Security is important when it comes to buying something."*
>
> *Ellen Persson (Sweden)*

Financial security was a major risk for Swedish and UK respondents; individuals were worried that their bank details and credit card details would not be kept secure when using apps to make purchases. This was not down to a belief that the developer had not made the app safe enough, but rather due to external and more sinister risks. Firstly, respondents spoke about hackers getting access to their details and credit information and using it to buy things online. Respondents in the UK even spoke about the risk of having their phone stolen and hackers then unlocking their phone and using their apps. Furthermore, respondents were worried about scams, being able to trust the company was a common anxiety, there was a constant risk that companies were trying to "catch me out" or "were not legit". There was a risk that certain apps would be dishonest and have hidden charges or may steal their credit card information.

> *"How easy is it going to be for a company to take all your details, by tap or by anything. They can take your contact details, or I don't know, I tapped for Sainsburys and now I'm gonna start receiving emails from Sainsburys."*
>
> *Donato Checchia (UK)*

On top of financial security, respondents also were aware of the risk of using apps can have on their personal details. Abuse of information was a major problem for individuals. Here a respondent stated that they were worried

amount receiving unwanted spam from companies they had shopped with, or worried that by paying for an app they were giving companies access to information that they did not agree to.

> *"The biggest piss off factor, is the ASDA app, where you go and do all your shopping, you put it in the basket and then it crashed on me and it wouldn't let me purchase it. Are you joking me! I've wasted 40 minutes of my life adding things to this basket, searching, clicking and now you are telling me I can't purchase?"*
>
> *Joanna Anderson (UK)*

The risk of crashing was unique to UK respondents. Continually throughout the interviews respondents spoke about time being valuable to them. The reason they chose to adopt m-commerce apps was to "save time" or "pass the time", so the risk of "wasting time" was a major barrier for adoption. An app that crashes and is unproductive is a major risk to their time. However, this will only put individuals off using that developer's app and not the whole category of apps, that is to say the above individual would not use the ASDA app again, but would be open to continue doing food shopping through an alternative app.

4.2 ASIAN MARKET ANALYSIS

4.2.1 PERCEIVED USEFULNESS

4.2.1.1 SUBJECTIVE NORMS

> *"Someone introduced this app to me. They just think the app is so convenient, so they share the information with me."*
>
> *Peng Zhou (China)*

> *"Because I don't have many ideas about cell phones and devices, and so I ask my friends who know better than me and I believe that knowledge and opinions and follow them."*
>
> *Cheongrack Ryu (Korea)*

Both Chinese and South Korean respondents showed that peer recommendations played an important role in motivating them to adopt m-commerce apps. Chinese and South Korean respondents stated that they listened to the recommendations of their peers and appreciated the knowledge that friends and colleagues shared with them.

"When I'm shopping online, I will find if this website has an app for smartphone. If it has an app, I will download it to use."

Xiaochen Liu (China)

"We rarely talk about what apps we are using now, so I don't know which one they use. But I know my friends are using apps for shopping, I'm sure about this."

Huiyan Wang (China)

Asian respondents stated that peer recommendations were not the only method they used to learn about new apps, they were also motivated to adopt apps due to independent discovery. Individuals explained that by using a website frequently they were able to learn that there was now an app they could download to accompany the website.

"You know 'social commerce'? It is very famous in Korea, it is a kind of site, and there are many things to purchase and many people buy purchases together, like they can shop together. So if people buy the same thing together we can get a discount, so I usually use that kind of app. Like Coupang."

Gyongju No (Korea)

A finding that was unique to South Korean respondents was the effect of collective purchasing on m-commerce app adoption. Group buying was a constant theme among South Korean respondents. Consumers would use messaging apps to buy and send gifts to one another on their birthdays, and it was expected for individuals to receive coupons for cakes and ice cream through apps from their friends. Respondents also spoke about the usage of the 'Coupang' app that allowed them to buy tickets and items cheaply through their phones if they bought things together with friends.

4.2.1.2 SOCIAL IMAGE

"It will improve my social status among my friends and relatives who don't use m-commerce apps in some way. They may think I'm more fashionable than them."

Yue Teng (China)

"It is on mobile firstly, and everything on mobile is cool."

Peng Zhou (China)

Often when talking about apps and the effect on their social standing, Chinese respondents showed that the adoption of m-commerce apps had a positive impact on image. Individuals were proud of themselves, stating that by using particular m-commerce apps it made them feel more popular among their peers, since using m-commerce apps was fashionable.

> *"Because my friends are all using mobile apps to buy things, it becomes a very common phenomena around me."*
>
> *Huiyan Wang (China)*

> *"I think a lot of Korean have addiction, but already it is too much. I think it is a big problem, but it is already kind of like Korean culture."*
>
> *Gyungju No (Korea)*

Both Chinese and South Korean respondents saw the use of m-commerce apps for purchases as common behavior among the people around them. Individuals did not view apps as high-tech or only available to the smartest and most elite of society, but rather for everyone. This ease of adoption was sometimes seen as negative, but acceptable behavior. Our interviews revealed that at times Asian m-commerce app users believed that using apps meant you enjoyed looking for cheap items or that you were addicted. However, since everyone around them was doing the same thing, it wasn't viewed as unacceptable behavior.

4.2.1.3 COGNITIVE INSTRUMENTAL PROCESS

> *"I just use mobile apps to buy something and I never tried to use mobile browser to buy something."*
>
> *Xiaochen Liu (China)*

Nearly all our Chinese respondents believed that using m-commerce apps was the only way to make purchases on their mobile phones. Throughout the interview process Chinese respondents did not speak about using mobile browsers, or mobile sites to make purchases. Suggesting that for Chinese consumers m-commerce and app stores go hand in hand, rather than app shopping being a form of m-commerce shopping.

"Some companies have special offers for mobile shopping, such as lower price or limited edition, especially the price is lower."

Xiaochen Liu (China)

"I'm not a stupid person. The travel agents are more expensive than mobile tickets."

Hyojin Bae (Korea)

Some Chinese and South Korean respondents stated that one of the benefits for using m-commerce apps was to shop for special offers and limited editions. Several of our respondents stated that they used apps to make purchases since apps offered them a lower price than stores, and also gave them access to products which couldn't be found in stores.

"The advantage of shopping by mobile is that you can buy things anywhere and anytime, such as before you go to bed you can search for a while and you don't need turn on your computer. You can check the status of the deliveries by app, it's more convenient."

Yue Teng (China)

"When you don't buy the tickets in advance it will be sold out. But when buy the tickets through the phone I can save time."

Nahyoung Kim (Korea)

Chinese and South Korean respondents both agreed that shopping through m-commerce apps was convenient. The ability to shopping anywhere, and being able to save time was a key influencer for Asian respondents to adopt m-commerce app shopping. Particularly for South Korean respondents, mobile ticketing was essential to their lives. Due their busy schedule and the high population in Seoul, respondents stated that if they did not buy tickets early enough through their phones, tickets would sell out. Therefore the only option for them was to skip the queues and purchase tickets through an app as soon as they needed to.

"I wanted to keep up with the fashion, to see what is coming up. And especially right now because I don't live in Seoul anymore, so I can't go to Seoul all the time. So, if I could get the app and keep the app updated and see what is coming out, it would be easier to see what is coming out."

Hobin Han (Korea)

"I use apps to search some information about new clothes and books. And I do it every day."

Xiaochen Liu (China)

For Asian respondents, m-commerce apps were not only a useful tool for getting discounts or saving time, but were also instrumental for keeping up with trends. Apps were used for trend spotting which allowed Asian shoppers to keep up to date on the latest fashion and see what is popular without going out into stores.

"You can try clothes and use some samples of cosmetics when you do physical shopping. Online and mobile shopping you can't try. You can't feel the quality of the products by online and mobile shopping."

Xiaochen Liu (China)

However, a key finding among both our Chinese and South Korean respondents was the absence of sensory stimulus that m-commerce app shopping produced. Experience consumption was still important for Asian respondents; yet, app shopping removed the sensory aspect. This lack of sensory stimulus negatively affected adoption rates among our Asian respondents, on one occasion, a South Korean interviewee stated that due to the fact she was unable to feel the clothes she was buying she steered clear of m-commerce clothes shopping entirely.

4.2.2 PERCEIVED EASE OF USE

4.2.2.1 CONTROL & SELF-EFFICACY

"No, I don't need any help. Most of functions in app are similar as online shopping via PC, and easy to understand."

Huiyan Wang (China)

"I think it is easy for everyone. Nothing needed for using the app."

Peng Zhou (China)

With one exception, all of our Asian respondents agreed that they felt confident using apps, and performing m-commerce though apps was an easy activity for them. In this regards, control was not a concern for the Asian individuals questioned.

"The screen on the mobile is too small, the network reception is bad, and it goes slowly."

Huiyan Wang (China)

"It (the size of mobile phone screen) will have some influence. Sometimes, it feels uncomfortable."

Peng Zhou (China)

Chinese respondents believed that most of the problems with using m-commerce apps were with the technical specifications of the phone and the country's mobile infrastructure. A small screen, the low speed of Internet and high network charges were negative factors that impacted the adoption and usage of m-commerce apps for Chinese respondents. Interestingly, our South Korean respondents did not find any external limitations to adopting m-commerce apps, suggesting that the country was better suited for m-commerce than China.

4.2.2.2 ANXIETY

Initially, a general reaction among Chinese and South Korean respondents when asked about any worries or anxieties they had when purchasing through apps was confusion. Many individuals had to think for a long time before coming up with an answer, whilst others were confused why this would even be an issue.

"I'm afraid of buying something fake, and also the quality of the goods worries me."

Xiaochen Liu (China)

"Yeah, but I can't see it in my hand. I can't touch it, I don't know what the size is, and I might be wasting my money."

Hyojin Bae (Korea)

A frequent concern for Chinese and South Korean consumers was that their purchases would be worthless. Chinese respondents were anxious about buying fake or low quality products and therefore wasting their time and money, while South Korean respondents were anxious that without being able to touch what they were going to buy, they would not know if they would get exactly what they wanted. However, these anxieties about buying worthless items did not affect adoption rates greatly among Asian respondents, as individuals understood that

m-commerce purchases were still cheap, and if they received poor items they could easily return the item.

> *"It will be my first time to use it, so I feel a little bit nervous actually, because I don't know the rules. But after I have an experience, it'll be cool."*
>
> *Hyojin Bae (Korea)*

An unexpected find was that South Korean respondents with inexperience of using m-commerce apps were anxious about incorrectly following the rules when making purchases through apps. In this regard, the respondents were not talking about doing something illegal, but rather, due to the social aspect of making purchases, worried about social norms and making a mistake.

4.2.3 HEDONIC BENEFIT

4.2.3.1 PERCEIVED ENJOYMENT

> *"I think for fun real shopping is better, because when I go shopping usually with my friends, we can look together and we can comment on our clothes and shoes. When you shop with others it is very fun."*
>
> *Hyojin Bae (Korea)*

When asked to compare the enjoyment received from mobile app shopping with real shopping, most Asian respondents replied that they thought physical shopping was more fun and they only did app shopping because they did not have the time to go to department stores. They missed the sensory stimulation and direct social interaction that physical shopping provided, but due to a busy schedule, app shopping was the best they could hope for. If they had enough time and wanted enjoyment, Asian consumers would prefer to do physical shopping.

> *"Yes, of course. 70% of time using m-commerce apps is for relieving boredom. Most of time, I will use these apps to search something new and may try it in stores."*
>
> *Huiyan Wang (China)*

Even though most enjoyment came from shopping in the real stores, respondents from China and South Korea agreed that they could relieve boredom by using m-commerce apps. When they had free time, individuals would use m-commerce apps to look for something they wanted to relieve

boredom. Respondents stated that they used apps with a purpose; window-shopping for items they needed and were going to buy later. This shows a utilitarian perspective to shopping; respondents were not using m-commerce apps to have fun and relieve boredom, but rather to be productive while they were bored.

> *"Some people are on their cell phones when they are walking. Sometimes I do that, I walk and I look at Kakaotalk… It's called Kakao Style. And all you do is scroll up and down and just check what clothes you like. When you find something you like, you just click on it... It is crazy right? It is addicting."*
>
> *Hobin Han (Korea)*

South Korean respondents did have a degree of hedonic motivation for shopping on their phone, especially when they were commuting. Individuals explained that the experience of m-commerce app shopping was not always fun or enjoyable, but rather addicting. They felt as though they were doing it because they could not stop. How this started, respondents could not explain, it appeared to be ingrained in their culture and daily life.

4.2.3.2 COGNITIVE CONCENTRATION

> *"I use the m-commerce app almost every day. Less than 20 minutes, I think."*
>
> *Xiaochen Liu (China)*

> *"Almost every day, I buy staple goods on my way home or when I waiting for the bus."*
>
> *Yue Teng (China)*

Most Asian respondents claimed they used m-commerce apps with high frequency, but it did not last for a long time. On average, they made purchases and checked information via m-commerce apps several times a day, on a daily basis. On each occasion, individuals stated they would be on their app checking for around five to twenty minutes.

> *"You see a lot of them on the subway and on the bus, and they are just doing stuff on their phone, but it has nothing to do with anything. They are just checking stuff."*
>
> *Hobin Han (Korea)*

Chinese and South Korean respondents both stated that they used apps to buy stuff during their commute and take advantage of this period of free time. Both Chinese and South Korean interviewees showed that their mobile shopping behavior had low immersion. They were not actively engaged and focused on m-commerce shopping, and it did not take up a lot of their focus, as such they were able to perform these tasks anywhere.

4.2.3.3 PERCEIVED PLAYFULNESS

> *"When I downloaded these apps, I was thinking to use them for fun. If the apps are hard to use, I will delete them soon."*
>
> *Yue Teng (China)*

> *"Just to see. Why not? If somebody gave me a movie and said this will only work on your phone, then yeah, I'd watch it."*
>
> *Hobin Han (Korea)*

Curiosity was a key motivation for Asian respondents to adopt m-commerce apps. Our interviewees spoke about how if they were curious about a new app, they would download it and try it out to make purchases, even if it was not necessary for them. Consumers from South Korea and China would often give in to their curiosity about the functionality's of different m-commerce apps.

4.2.4 COMPATIBILITY

> *"I think these apps can do their job well. Actually, I don't need it to do a lot of jobs, just several simple functions is enough."*
>
> *Huiyan Wang (China)*

> *"I think I would buy anything using my cell phone. I live with my two cats and when their food is not enough I usually use my cell phone to buy their cat food."*
>
> *Gyungju No (Korea)*

Asian respondents were satisfied with the functions of the m-commerce apps they used. Individuals were open to buying almost anything through an app, although they showed signs of preferring to go to stores to feel and try stuff, they had not ruled out the possibility of eventually buying everything through an app

if they needed it. Some individuals spoke about never buying clothes online, but when asked what they would do if they needed new clothes and didn't have time to go to the shop, they replied that in that case they would use an app, indicating that their hedonic need for physical shopping did not entirely eliminate the utilitarian value of m-commerce. Other respondents were open about how they saw no difference between retail shopping an app shopping and they would happily purchase everything through an app, since everything is sold through an app, even cat food.

> *"I don't have enough time to shop, so in Korea many people are busy working, so I don't have enough time to shop"*
>
> *Hyojin Bae (Korea)*

> *"These apps have become a part of my daily life."*
>
> *Yue Teng (China)*

Asian respondents explained that m-commerce apps were compatible with their lives. As some individuals said, they adopted the app due to the fact that they did "not have time" to go to the stores all the time. Asian respondents had busy lives, and m-commerce apps allowed them to fit activities in their busy schedules.

4.2.5 PERCEIVED RISK

> *"Some expensive product may be counterfeit. The more expensive stuff, the more easily counterfeit."*
>
> *Xiaochen Liu (China)*

> *"If somebody knows the sky password on my phone - all they have to do is just open the app and buy whatever they want."*
>
> *Hobin Han (Korea)*

A perceived risk of using m-commerce apps among Asian respondents was the risk of financial loss. Respondents spoke about the risk of both external and internal factors that could harm them financially. For example, the risk of spending a lot of money on counterfeit goods was a common fear in China, and without the sensory stimulus the risk of losing money on counterfeit goods increased with m-commerce app shopping. Additionally, Asian respondents saw

the risk of financial harm from third parties who could hack into their phones easily and get control of their apps to buy tickets or items for their own needs.

> *"I am afraid they may leak my information to others. I don't want strangers to know where I live, my phone number and my habits."*
>
> *Huiyan Wang (China)*

> *"About two months ago three banks sold my private information to another company so I was worried about it, so I couldn't use the cell phone for shopping."*
>
> *Nahyong Kim (Korea)*

Another high risk for Asian respondents was privacy. Similar to financial loss, individuals were worried that the developer of the app as well as hackers could steal their private details. South Korean respondents spoke about how they briefly had to stop shopping on phones due to a major security breach with mobile banking apps, when over 10,000 individual's details had been stolen and sold to other parties.

> *"It may have risks, but I don't think it is so serious."*
>
> *Yue Teng (China)*

> *"No, I never scared of using my phone. Because I always check the reviews and other people's comments, I never feel it is not safe."*
>
> *GyungJu No (Korea)*

Although some Asian respondents noticed several risks when they used m-commerce apps, these risks had a low influence on their adoption and usage of m-commerce apps. Asian respondents still had confidence and trusted the apps they used, even though they understood that they may be opening themselves up to both financial and personal harm.

CHAPTER 5 – DISCUSSION

5.1 PERCEIVED USEFULNESS

5.1.1 COMPARISON UK / SWEDEN AND CHINA / SOUTH KOREA

Past research has shown 'Perceived Usefulness' to be one of the main influences on new technology adoption. Following Venkatesh and Davis extension of TAM (2000), PU is made up of subjective norms, where individuals are motivated to adopt a new technology based on peer pressure, even if the adoption of the new technology may cause harm. Furthermore, Venkatesh and Davis (2000) state how subjective norms include social image, where individuals are motivated to adopt a new technology if they believe it will raise their social standing.

Our results showed that for respondents from the UK and Sweden peer pressure did not have an effect on adoption rates of m-commerce apps. Individuals stated that they listened to recommendations from their peers, but that alone would not be enough to convince them to start using an app. Respondents stated that they wanted to better understand the value of the app themselves before adopting it. Contrary to the findings of Venkatesh and Davis (2000), UK and Swedish respondents were not motivated to adopt this technology due to the recommendations of their friends, and they especially were not swayed to adopt an app that did not benefit them directly. On the other hand, interviews with South Korean and Chinese respondents agreed with past research. Our Asian respondents stated that they not only listened to recommendations from their peers, but also downloaded and began using m-commerce apps based on these recommendations, even though they may not fully understand the app or the benefit of using it.

In regards to apps and social image, our research into the European market slightly supported previous studies. UK consumers stated that using m-commerce apps did not improve their social image, but by not using m-commerce apps their social status would be negatively affected. Respondents used terms such as "idiot" and "out of touch" to explain how they would be labeled in their social groups if they didn't understand mobile apps. The fear of

being ridiculed motivated individuals to download and use certain m-commerce apps. Interestingly, our interviews with Asian respondents did not show any effect of m-commerce app adoption on social image. Some respondents stated feeling 'fashionable' using apps, but didn't show any strong motivation to use an app because they wanted to appear fashionable. Furthermore our results showed that South Korean consumers had a very neutral opinion on apps, these apps were available to everyone and easy to use, whether you chose to use or not use m-commerce apps did not affect your social standing.

Finally, in regards to PU's influence on adoption, past research has shown that the more a technology is seen as suitable for performing a task at a high standard the more positively it will influence the adoption rate of a new technology (Venkatesh & Davis, 2000). Our interviews with European and Asian consumers supported this finding; however, consumers from different cultures had different ideas of what tasks m-commerce apps should perform. For respondents from Sweden and the UK, m-commerce apps were suitable for trend spotting and providing convenience. However, according to UK and Swedish respondents they did not see m-commerce apps as being suitable for finding discounts and good deals on items. Additionally, apps were not able to provide any sensory stimulus for them. South Korean and Chinese respondents shared the same values that m-commerce apps were not suitable for providing a sensory shopping experience, they also reaffirmed the idea that mobile apps were a useful tool for trend spotting and shopping without the limitations of space and time. Yet, contrary to what European respondents believed, interviewees from Asia saw m-commerce as extremely effective at providing discounts and special offers on items, and this was one of the key motivations for using m-commerce apps.

5.1.2 CULTURAL INFLUENCE

The responses given by consumers from Asian and European countries correspond to the theories discussed by Straub et al. (1997) and McCoy et al. (2007) that stated the ineffectiveness of PU on adoptions rates in particular cultures.

According to McCoy et al. (2007), collectivistic cultures will adopt a new technology regardless of whether it is useful to them, as long as their peers are doing the same thing. Here we see that within highly collectivistic cultures, such as China and South Korea, peer groups had a much bigger impact on adoption of mobile apps. Asian respondents wanted to follow what their friends were doing, and wanted to be part of the group, buying stuff together and sending gifts to each other through apps. Compared to more individualistic cultures such as Sweden and UK, where respondents were more focused on the 'I'. Among our European respondents, consumers stated that they listened to recommendations but ultimately it was about how this app could benefit me, believing that it was more important that using an app was of benefit to them, rather than using an app just to follow what others are doing.

Moreover, Straub et al. (1997) believed that in highly masculine cultures technology adoption rates would be lower as individuals would be unable to show off their social status, this was true with one of our UK respondents who stated that they would not use an app everyone was using, purely because everyone used it. However, our findings showed that in highly masculine cultures, PU could be a motivator for adoption as it can be used as a form of self-preservation. Among UK respondents, individuals spoke about how it was important for them to understand and use apps so that they did not come across as being an "idiot" in front of their peers. However, in a feminine culture such as Sweden, consumers took a more neutral perspective on apps and social image. Saying that anyone can use apps, and whether you choose to use or not use an app did not have a big impact on how others saw you. Interestingly, our results showed the opposite of Straub's findings, that it was consumers from highly feminine cultures who were not motivated to adopt apps due to social image.

5.2 PERCEIVED EASE OF USE

5.2.1 COMPARISON UK / SWEDEN AND CHINA / SOUTH KOREA

'Perceived Ease of Use' is seen as the second major motivator on adoption in the original TAM, Venkatesh groups PEU into 'anchors' and 'anxieties' and states that these factors affect the level of adoption rates among users of new technologies

(2000). Past research into anchors state that if an individual feels limited both by their own lack of control or external factors, then adoption will decrease. Yet our findings did not strongly support previous studies.

UK and Swedish respondents explained that they felt limited using m-commerce apps due to external barriers. Yet, even though our European interviewees stated they felt limited by external factors, it did not affect them in their decision to adopt m-commerce apps, but only limited their usage of the apps. Similarly, Chinese respondents spoke about feeling limited by the physical dimensions of the phone and the infrastructure of the country; however, with our Asian respondents these limitations did not affect adoption rates, or level of usage. It was more an annoyance than a factor that prevented them from using their phones as much as possible.

Moreover, according to Venkatesh (2000) and Yang et al. (2003) anchors regarding an individual's past experience of using a technology will affect their rate of adoption. For this, our findings proved true. European respondents spoke about m-commerce apps as an extension of e-commerce. Individuals had experience shopping online and making purchases through websites, therefore they did not have any trouble understanding the concept of e-commerce through mobile apps. Our Chinese and South Korean interviews showed us that if an individual had experience using mobile phones and apps it would not be a problem for them to adopt new m-commerce apps and integrate them into their lives.

On top of the effect anchors can have on adoption of a new technology, Venkatesh (2000) and Chan-Olmsted et al. (2004) identify that an individual's apprehensions about a technology will affect adoption. Our results in this regard were mixed. When asked about worries and apprehensions that they had about using m-commerce apps, European respondents spoke about worries concerning the developers and companies behind the apps, rather than the apps themselves. For South Korean and Chinese respondents the question of having apprehensions over using m-commerce apps caused confusion, interviewees didn't understand why they would be worried about using apps.

5.2.2 CULTURAL INFLUENCE

Comparing our responses on the effect of PEU and adoption with the past findings of previous researchers provides mixed results.

According to McCoy et al. (2007), highly masculine cultures will adopt a technology regardless of the level of Perceived Ease of Use if they need it to complete a task. Both UK and Chinese respondents identified several external barriers for m-commerce use, yet this did not deter them from adopting m-commerce, this finding is to be expected from two highly masculine societies. However, Swedish and South Korean consumers, two cultures that rank low on the masculinity scale also produced similar responses to the UK and China. Suggesting that the masculinity of a culture does not necessary predict how anchors affect adoption rates.

In regards to anxieties, McCoy et al. (2007) suggest that the adoption rates in masculine cultures such as China and the UK would not be affected, whereas feminine cultures such as Sweden and South Korea would. Our interviews proved this to be incorrect, as European individuals were more worried about the anxieties of using m-commerce app, whilst Asian individuals appeared confused by the idea of being apprehensive about using m-commerce apps. Leading us to believe that level of masculinity does not predict whether anxieties will affect adoption, but rather it is affected by other cultural dimensions.

When examining the apprehension that European consumers had, a lot of issues can be connected to Hofstede's concept of Power Distance. UK and Swedish interviewees spoke about lack of trust between them as a consumer, and the company, believing that the company was trying to scam them, or wouldn't provide adequate support and help if there were problems with their service. According to Hofstede, in cultures with low Power Distance "members of a society accept and expect that power is distributed unequally" (2014), as such UK and Swedish consumers were apprehensive about adopting certain apps from companies they didn't know well or like for fear of being mistreated. Compared to China and Korea, two cultures with high power distance, and where members of society are more open to accept their position in the overall

hierarchy and not question to roles and duties of those above, i.e. the company developing the app.

Furthermore, our findings showed that the level of individualism in a society affected how consumers allowed their apprehensions to affect adoption rates. From our Asian interviews, individuals understood that there were some worries with using m-commerce apps, but because nobody else around them was having problems, they brushed aside their own personal apprehensions and went with the collective group. Compared to our respondents who came from highly individualistic cultures, when even after comparing the experiences of their peers they still had anxieties about using an app, since they felt that for them personally something might still go wrong.

> *"Hmmm, no. Not really much, because I know so many people use it, including me, because of that I'm okay."*

> *"I just would not go for that, a few of my friends have it, but for me, I always think there will be a catch."*

Above are two statements, one main by a South Korean respondent and the other by a respondent from the UK. Here we can clearly see that level of individualism in a culture, outweighs the level of masculinity when it comes to effect anxiety has on m-commerce app adoption.

5.3 HEDONIC BENEFITS

5.3.1 COMPARISON UK / SWEDEN AND CHINA / SOUTH KOREA

Past research has shown that an individual's physical and online consumption activities can be separated into utilitarian and hedonic motivations. As TAM takes a very utilitarian perspective on technology adoption, our theoretical framework expanded on the original studies of Davis and Venkatesh to include the affect hedonic shopping motives can have on m-commerce app adoption. Building on the research of past authors, Hedonic Benefits included 'Perceived Enjoyment', 'Cognitive Concentration' and 'Perceived Playfulness (Davis et al. 1992; Cheong & Park, 2005; Wakefield & Whitten, 2006; Liu & Li, 2008; Lu & Su, 2009).

Although Perceived Enjoyment is important for influencing adoption rates, past researchers have concluded the Perceived Usefulness is still the primary influencer for technology adoption, even among hedonic systems. Our results agree with past findings that Perceived Enjoyment is not as influential on adoption as Perceived Usefulness. Interviews with both European and Asian respondents showed that although individuals did not perceive m-commerce apps as enjoyable, that did not affect their choice to adopt the app. They used m-commerce apps to achieve goals beyond enjoyment. UK respondents got no enjoyment from either physical or mobile shopping, but preferred to use m-commerce apps as it allowed them to be divorced from the crowded, confusing, stressful and time consuming activity of physical shopping. However, Asian respondents, who claimed that they received more enjoyment from physical shopping, stated they would use apps when they were commuting, not for the sake of enjoyment, but rather with a purpose in mind.

Cognitive concentration is the level of concentration or immersion an individual has when using a system. Previous studies theorized that the more immersed a user is in a technology the more enjoyable the technology is perceived as being (Jung et al., 2009; Liu & Li, 2011). Our findings showed that both European and Asian interviewees have a low immersion when using m-commerce apps. They used the app on the way home or at the bus stop when they were waiting for the bus, and even during the break between classes. For both cultures, the use of apps was a distraction, a way to pass the time, and it did not require a lot of attention or energy. From our findings it is difficult to conclude if low immersion of using m-commerce affected the perceived enjoyment of app users or not. However, the lack of immersion these m-commerce apps provided individuals did not affect their adoption rates.

Perceived playfulness has been defined as the curiosity an individual has towards using a new technology, and when combined with Perceived Enjoyment and Cognitive Concentration, Perceived Playfulness has been found to impact positively on adoption of hedonic technology. According to past authors Perceived Playfulness can be seen as more influential on adoption rates than Perceived Usefulness and Perceived Ease of Use (Moon & Kim, 2001; Cheong &

Park, 2005; Wakefield & Whitten, 2006; Lu & Su, 2009). However, our results have shown that not to be true in the case of some European cultures. UK and Swedish respondents stated that they were curious about trying certain new m-commerce apps, but they had no knowledge on how to go about finding out about these apps, leaving adoption rates unaffected. On the other hand, Asian respondents were curious about new apps and would follow up this curiosity, trying to learn more about the functionality and potential benefits of the app.

5.3.2 CULTURAL INFLUENCE

Ozen and Kodaz (2012) identify that individualistic cultures have more utilitarian motivations towards shopping than collectivistic cultures. As such, our findings corresponded with the findings of Ozen and Kodaz (2012). UK consumers are highly individualistic people, and as a result spoke about their dislike for physical shopping. Comments about not wanting to deal with large crowds and different people when they are at a shopping center, lead UK consumers to adopt m-commerce apps that allowed them to shop in a more private manner. For our UK respondents, m-commerce app shopping was not done for hedonic reasons, but rather because it was a less stressful form of shopping. Interestingly, Sweden, a culture also ranked high on the individualism scale stated that they preferred physical shopping for hedonic reasons, and where unable to receive any enjoyment from m-commerce apps. However, their continued use of m-commerce through mobile apps was influenced by utilitarian motives.

Furthermore, our responses showed that individuals from China and South Korea, two cultures with high collectivism and high hedonic motivations to shopping, were using m-commerce apps also for utilitarian purposes. In the case of our Asian consumers, physical stores provided them a level of enjoyment which mobile shopping couldn't. However, due to their busy working conditions, going to stores and indulging their hedonic needs was not a viable option. Therefore, using the utilitarian function of m-commerce they chose to use their free time wisely and more productively. Our interviews showed that none of the four nationalities received any hedonic value from shopping through mobile

apps. Even among cultures where individuals are traditionally motivated to shop due to hedonic benefits the adoption of m-commerce was influence by its usefulness. Showing that whether individuals came from an individualistic utilitarian culture, or a collectivistic hedonic culture, m-commerce was still adopted for its utilitarian properties.

Moreover, in regards to perceived playfulness and adoption rates our findings showed that similarities exist between cultures with levels of curiosity being equal, but differ when it came to acting on their curiosity. Asian consumers stated that they would like to try apps that they were curious about, whilst European consumers were not sure how to move forward with their curiosity and would not always want to try apps that there were curious about. Individuals from the UK spoke about how they didn't know how to find out about new apps, nor did they trust new apps even if they appeared interesting.

Applying Hofstede's cultural dimensions we can see that as a highly masculine culture, respondents from the UK value success and achievement, and do not want to belittle themselves by parading their lack of knowledge to their peers. This results in consumers being unable to learn about new apps they are curious about, without first admitting that they lack knowledge. Moreover, UK and Swedish society has a low power distance and high individualism. As a result, European consumers do not easily trust new apps, even though they are curious about these apps and even when peers may make recommendation. Conversely, Chinese and South Korean consumers are able to satisfy their curiosity with new apps, by listening to experts and trusting the experience of those around them. Our findings show that individuals from cultures with high masculinity and individualism, and low power distance are left unaffected by their playfulness. Since curiosity about an app can be seen more as a barrier than a motivation for adoption.

5.4 COMPATIBILITY

5.4.1 COMPARISON UK / SWEDEN AND CHINA / SOUTH KOREA

According to Wu and Wang as a technology is seen as being more compatible with an individuals needs, values and past experiences, the rate of adoption will increase (2004). Making compatibility more effective at predicting adoption of a new technology than Perceived Usefulness and Perceived Ease of Use. Interviews with European and Asian consumers supported past findings, highlighting the importance of m-commerce app compatibility and adoption rates in both markets.

From our findings, European respondents connected compatibility with frequency of use. UK and Swedish respondents spoke about how they used apps that helped them complete tasks they did frequently, i.e. Internet banking, booking hotels, and paying for public transport. If an app allowed them to complete a task that they did not do frequently, that is to say it was incompatible with their daily needs, then that app would not be used, and the traditional method would be followed. For instance, European respondents spoke about how they did not go to the cinema often, or do weekly shopping regularly, so for them they did not see the need for downloading ticketing and grocery apps, when it was perfectly fine going online or to the store. Moreover, when talking about the apps and their compatibility with their needs, our European respondents spoke about how apps needed only to complete specific tasks, rather than using an app that can do a variety of tasks. Finally, a finding unique to our UK interviews was that individuals saw themselves as being highly spontaneous shoppers, and how that affected their decision on which apps to adopt. UK respondents spoke about how they did not like buying groceries in advance since they would not know whether they would be home most of the following week, or out with friends. Grocery shopping apps, appeared to be aimed at people who liked to plan ahead, and as spontaneous shoppers, UK respondents did not see any compatibility with their values.

In regards to our results with Asian respondents, individuals stated that m-commerce apps were compatible with a lot of their needs, values and past

experiences. M-commerce apps were used to satisfy a lot of our Asian respondents needs, and had already been well integrated into their lives. This high compatible of apps with our Asian interviewees led to an increase of m-commerce app adoption amongst our respondents.

5.4.2 CULTURAL INFLUENCE

As previously mention, with agreement to the findings of Ozen and Kodaz (2012), European consumers have a higher utilitarian motivation to shopping, as such consumers use m-commerce apps with clear aims and question the values of apps to their needs. For instance, apps that are used to perform habitual tasks are valued as compatible with their needs and adoption rates increase. Moreover, apps that perform a specific function are valued higher than those that can do various unnecessary tasks. Throughout our interviews, it was also interesting to find that UK respondents identify themselves as particularly spontaneous shoppers. In correspondence to Hofstede, we can connect this to being a society with low uncertainty avoidance. Individuals did not make plans too far in advance, and as an effect did not see apps that allowed them to plan their purchases as compatible with their values and needs.

5.5 PERCEIVED RISK

5.5.1 COMPARISON UK / SWEDEN AND CHINA / SOUTH KOREA

Previous studies have stated that the higher consumers perceive the risks associated with a technology the lower the adoption rates (Liu & Wei, 2003; Teo and Pok, 2003; Wu and Wang, 2005; Mallat, Rossi, Tuunainen & Öörni, 2008). Interviews with European respondents supported this past research, whereas our Chinese and Korea respondents showed the opposite to be true that perceived risk did not affect their adoption.

Our findings show that both European and Asian respondents perceive risks with adopting m-commerce apps similarly, but respond to it differently. According to our interviews, the major risks for individuals from the UK and Sweden associated to m-commerce app adoption are financial and personal information. European respondents believe that m-commerce apps lack

protection for payment with credit cards, and are worried of hackers getting access to their payment details. Moreover, respondents rated the security of their personal information highly. Similarly, they didn't feel their personal information and the information of their contacts were kept secured enough using certain m-commerce apps. A more peripheral risk that European respondents expressed was in regards to lost time, they were aware of the risk of an app crashing and losing all their information and orders, therefore costing them valuable time. To counter these perceived risks European respondents would reduce their usage of several m-commerce apps, or even stop using some apps altogether, especially apps they saw as being new or unofficial.

Although Asian respondents also perceived the risks associated with financial and personal security, they did not consider these risks as an obstacle for them adopting m-commerce apps. Respondents from China and Korea stated that they did not believe these risks would harm them, and kept their confidence in the apps they were using. Interestingly, when there was a cyber-attack on Korea, and many individuals' bank details were hacked, respondents spoke about how they lowered their usage of m-commerce apps immediately afterwards, but then returned to their usual behavior less than two months later. In brief, what our interviews showed was that perceived risk had insignificant influence on adoption and usage of m-commerce apps in the Chinese and South Korean market.

5.5.2 CULTURAL INFLUENCE

It is interesting to find that both European and Asian consumers perceived similar risks with m-commerce. However, it was how individuals responded to these risks that varied depending on their culture. In highly individualistic cultures such as UK and Sweden, adoption rates would be negatively affected, as consumers would avoid m-commerce apps in order to eliminate the risks and protect themselves. They valued their own protection highly and were not comforted by the experiences and reassurances of others. Conversely, influenced by their collectivistic society, Asian respondents trusted people in their group,

and recognized that if their peers were not harmed by these risks, then they too would remain safe from harm.

5.6 KEY FINDINGS

By expanding TAM to we were able to create our own theoretical framework; this framework was then used to conduct interviews and analyze results. Through this we were able to identify what were the key differences between the European and Asian market.

Perceived Usefulness	European consumers are not affected by subjective norms.
	European and Asian consumers could not agree on all cognitive instrumental processes that m-commerce apps could provide.
Perceived Ease of Use	Asian and European consumers respond to anxiety differently. Anxieties have a negative effect on European app adoption, in regards to lack of trust, and lack of support.
Hedonic Benefits	Asian and European consumers respond to curiosity differently. For Asian respondent's curiosity will lead to app adoption, whilst European consumers adoption are left unaffected.
Compatibility	Asian consumers saw that m-commerce apps were compatible with almost all their existing needs, values and experiences, whilst European consumers had a higher set of standards that apps needed to be compatible with. Particularly in needed to do specific tasks, had to be useful for frequent tasks, and it had to allow for spontaneous shopping.
Perceived Risk	Asian and European consumers perceived the same risks in m-commerce app adoption; however, for European users these risks had a major negative effect on app adoption, whilst Asian consumers were left unaffected.

Table 5: Key differences between European and Asian market

To understand why the differences occurred between Asian and European markets, we examined our findings using Hofstede's cultural dimensions of Power Distance, Individualism, Masculinity and Uncertainty Avoidance. We found that depending on a culture's ranking on Hofstede's cultural dimension, how they are influenced to adoption m-commerce apps will change (figure. 4)

UK / SWEDEN

- Anxiety has a major affect on adoption.
- Users do not trust apps.
- Curiosity has no effect on adoption.

CHINA / S. KOREA

- Anxieties do not affect adoption
- Curiosity has a positive effect on adoption
- Users listen and trust advice from experts

LOW HIGH

POWER DISTANCE

CHINA / S. KOREA

- Subjective Norms affect adoption.
- Curiosity affects adoption.
- Anxieties do not affect adoption
- Perceived Risks do not affect adoption.
- Users adopt apps for Utilitarian purposes.

UK / SWEDEN

- Subjective Norms do not affect adoption.
- Curiosity has no effect on adoption.
- Anxieties affect adoption.
- Perceived Risks affect adoption
- User adopt apps for Utilitarian purposes.

LOW HIGH

INDIVIDUALISM

S. KOREA / SWEDEN

- Social Image does not affect adoption.
- Curiosity affects adoption.

CHINA / UK

- Social Image affects adoption.
- Curiosity does not affect adoption.

LOW HIGH

MASCULINITY

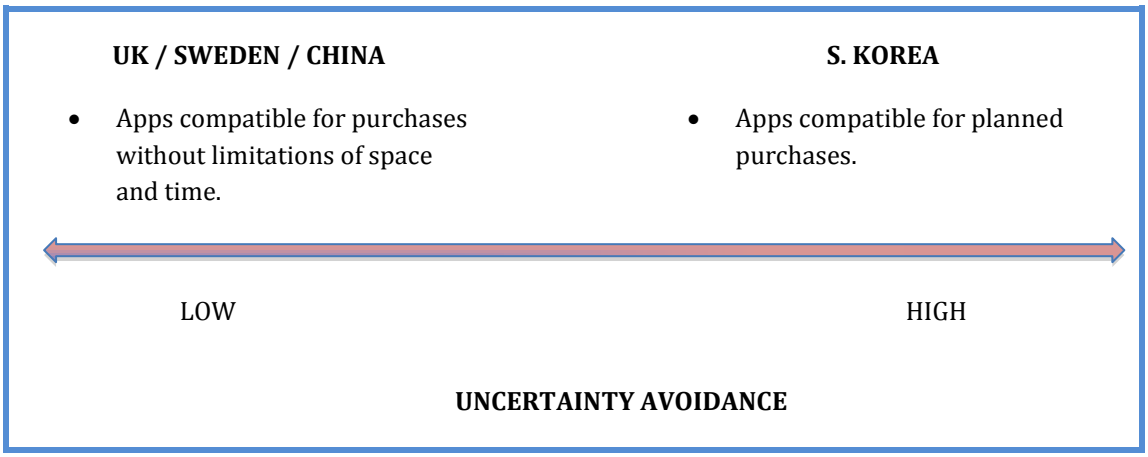

Figure 4: Influence of cultural differences on m-commerce app adoption

CHAPTER 6 – CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

6.1 CONCLUSION

With the development of wireless technology and the popularity of smart mobile devices, mobile commerce has become a new and welcome form of e-commerce that is gradually being adopted by consumers worldwide. Even so, studies show that m-commerce adoption rates differ between European and Asian markets. M-commerce mobile app usage is an important part of m-commerce activities, and so for this reason the aim of our thesis was to find out the reasons why consumer adoption behavior of m-commerce mobile apps differs between the European and Asian market.

Through semi-structured interviews that were guided by our adaption of TAM, interviews were conducted with 15 respondents across four countries, UK, Sweden, China and South Korea.

Our findings revealed that there were several differences between Asian and European consumers and m-commerce mobile app adoption. Primarily, European consumers had a lower knowledge on m-commerce apps and were unable to perceive the true convenience of m-commerce apps, when compared to Asian consumers. Moreover, European consumers were not affected by their subjective norms, and would not adopt apps based on recommendations from peers. What's more, European consumers perceived the risks of financial and personal security harm more highly than Asian consumers, which resulted in a lack of trust in mobile apps and negatively affected their m-commerce usage. By using Hofstede's cultural dimensions to understand what were the cultural causes for these differences, we believe that European consumers are greatly influenced by their low power distance and high individualism, which leads to a slower rate of m-commerce adoption when compared to the Asian market.

Although m-commerce may not currently be at a level to rival e-commerce, we believe that shopping through mobile apps has a highly impressive future as more consumers adopt the technology globally. M-commerce apps are not a

replacement for e-commerce; similarly e-commerce did not replace physical stores, individuals will adopt mobile for different reasons, as each app will compliment or satisfy certain values and needs of the consumers. These values and needs differ between cultures, and developers and marketers must understand different cultures if there are to increase adoption of their m-commerce apps.

6.2 LIMITATIONS AND FURTHER RESEARCH

Our approach to understanding how cultural differences affect m-commerce app adoption between Asia and Europe led us to collect qualitative data on four cultures; China, South Korea, Sweden and UK. Due to time and financial restrictions these four countries were chosen out of convenience, since both researchers had connections and guaranteed access to interviews with consumers in these countries. The selected countries gave us an insight into the differences in consumer culture between Asian and European consumers, but may not be relevant selections to make generalizations about the behavior of two continents as vast as Asia and Europe. Further research into other European and Asian cultures is necessary to get a clearer understanding on the differences for m-commerce app adoption between the east and west.

Moreover, through our snowball sampling method, we were able to get access to a large pool of respondents that allowed us to conduct our interviews in a limited time frame. However, by performing our sampling in such a way we exposed ourselves to biases where respondents recommend other interview candidates who may share similar views as them. To get a wider and more varied demographic, another sampling approach should be considered.

The aim of the research was to build on the quantitative research of past authors, and examine through natural language differences between adoption rates in different cultures. When conducting a cross cultural analysis using natural language we must be aware of the limitations of respondents being able to fully express their life world through their second language. For Swedish and South Korean interviews, respondents were chosen who had a high level of English; however, even with a good fluency of English there may still be certain nuances and colloquialisms that are not be present in their speech, limiting them to fully

express their life world. Furthermore, our interviews with Chinese respondents were conducted in Chinese and later translated and transcribed to English; through this translation process certain things may have been lost as not all concepts that exist in the Chinese language exist in English.

Finally, it must always be kept in mind the limitations of using Hofstede's cultural dimensions as a method of examining culture. Although a useful starting point for looking into different cultures, Hofstede ignores several factors. Firstly, it ignores cultures within cultures, which it is so say students within a country may follow different values than professionals and young families. Moreover, Hofstede was designed for understanding organizational culture and in this case has been applied to understand consumer culture between Asian and European countries. In this study Hofstede was used to help explain why differences may exist between adoption rates, but there are other factors that should also be accounted for, i.e. legal factors, political factors and traditional values.

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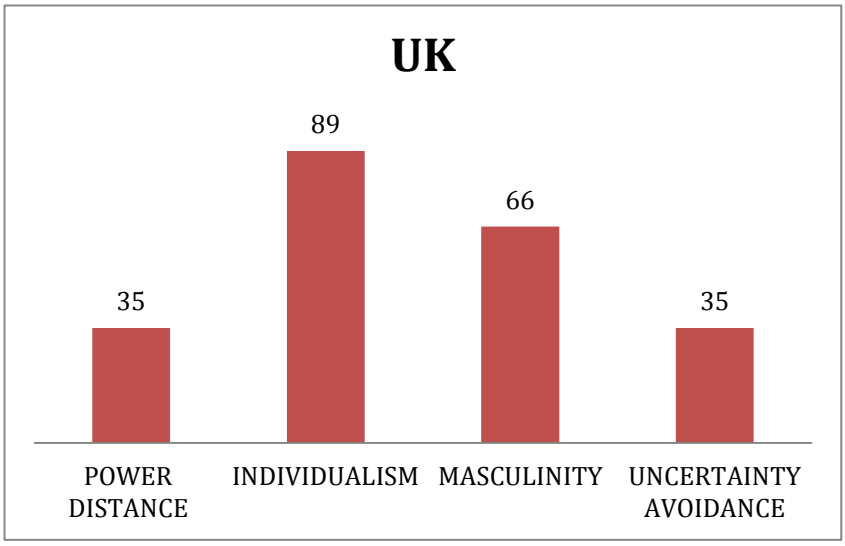
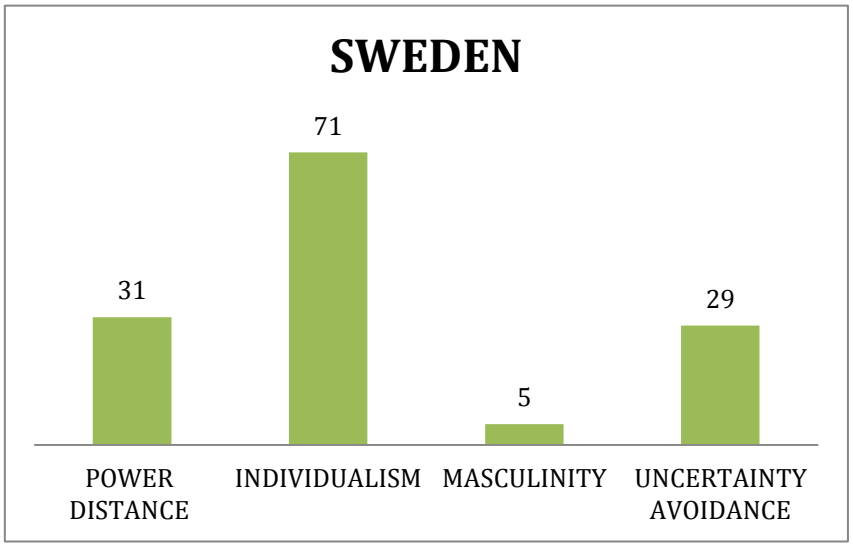
APPENDIX 1

UNITED KINGDOM



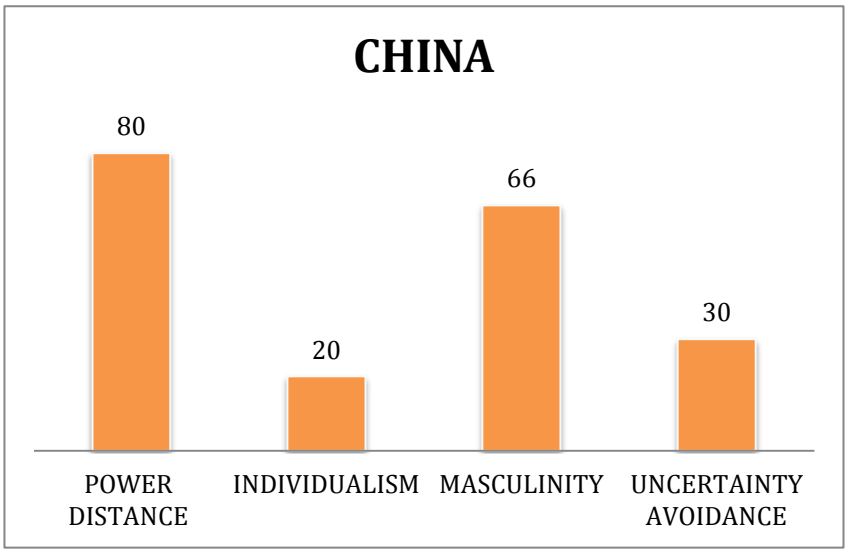
The UK ranks low on the scale of Power Distance and Uncertainty avoidance. They are also one of the highest countries in the world in terms of individualism, and also a very masculine society.

SWEDEN



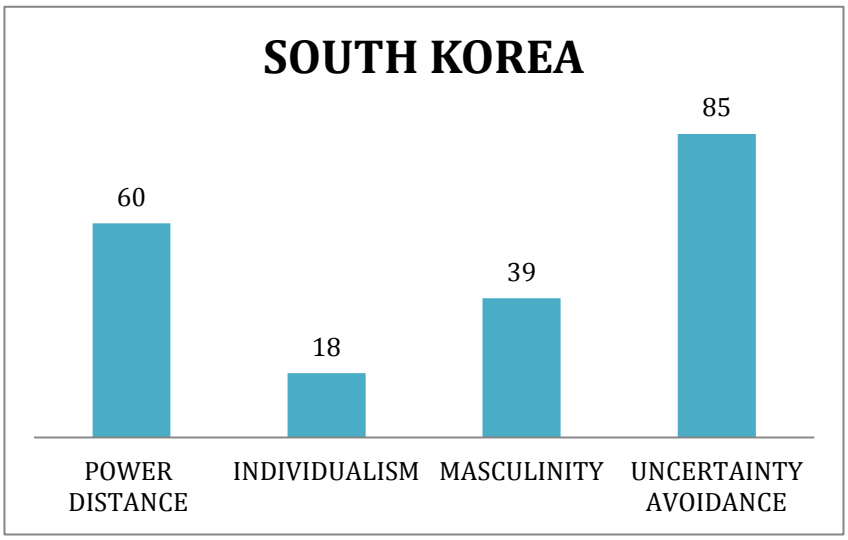
Similar to the UK, Sweden shows the same level of Power Distance and Uncertainty Avoidance in their society. They are also a highly individualistic society, although not as extreme as the UK. However, contrary to the UK, Sweden is a very feminine country.

CHINA



China ranks as one of the highest Power Distance cultures in the world. Similar to the UK, Chinese society is very masculine. Moreover, like Sweden and the UK, China has a low Uncertainty Avoidance, and is a collectivistic society.

SOUTH KOREA



Sharing several characteristics with China, South Korea is a nation with a high Power Distance, and low Individualism. However, unlike with China, South Korea is defined as a feminine society, closer to Sweden. South Korea is also one of the highest nations in the world for Uncertainty Avoidance.