

Mobility in Corporate Financial Reporting: The Unified Theory of Acceptance and Use of Technology Model

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Abstract: The objective of this paper is to explore the users' behaviour towards the adoption of smart mobile technology in corporate financial reporting on the basis of the unified theory of acceptance and use of technology model. This study is qualitative in nature to explore the factors that pressure users' behaviour towards the use of smart mobile technology in financial information communication, i.e. financial reporting, based on the theoretical foundation of the unified theory of acceptance and use of technology model (Venkatesh et al., 2003). This paper provides useful insights into users' perceptions of the adoption of smart mobile technology for financial reporting, on the basis of the model's categories. The findings can support future researchers and practitioners when dealing with the adoption of new technologies in financial reporting.

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1. Introduction

In the era of new technological developments in the business environment, the traditional financial reporting communication system has become less able to satisfy users' needs as it is not timely, interactive, accessible or detailed enough (Lodhia et al., 2004). As a result, corporate financial reporting has witnessed on-going communication technology developments leading to Internet reporting over the last two decades. Internet reporting has provided wider accessibility, interactivity and research ability, and more information availability to meet stakeholders (Al-Htaybat, 2011b; Al-Htaybat et al., 2011; Beattie and Pratt, 2003; Hanafi, et al. 2009; Jones and Xiao, 2003; Lodhia et al., 2004; Oyelere et al., 2003; Xiao et al., 2002). However, as technological developments race ahead, financial reporting needs to adapt even more to fit their mobility characteristic. At the same time, mobile technology has been developing rapidly and is now able to satisfy a wide variety of needs (Kumar, 2004).

Recently, mobile connectivity was enhanced through further new technological portable mobile smart devices, such as smart phones and tablets, to serve a range of purposes offering fast Internet access, instant connectivity between people or granting access to information services and other machine-to-machine connection-related services, which allow shifting activities geographically (Choi et al., 2011; Sørensen, 2011). It was predicted that 25 billion devices will be connected to the Internet by 2015, and that this number will be doubled by 2020 (Cisco Internet Business Solutions Group (IBSG), 2011, in Evan,

2011). Thus, users of smart mobile technology have now a higher level of connectivity, with more information availability, and faster and easier information accessibility. Using these sophisticated smart mobile devices and related applications allows users to be connected in different ways and at different levels. Sørensen (2011) argued that the use of mobile and continuously accessible technology led to the phrase 'enterprise mobility', as the phenomenon of being able to connect and communicate with colleagues, customers/clients, superiors anytime, anywhere, is gaining momentum in business. This is illustrated by the increasing number of business services and financial activities provided via mobile technologies, such as mobile banking, wireless electronic payment systems, micro payments, mobile shopping, and advertising and mobile bill payment. Also enterprise mobility is illustrated through users' accessibility to various current business communication channels, websites, E-mails, and SMSs, and social media such as Facebook and Twitter, via their smart mobile devices.

Enterprise mobility is reflected in corporate financial reporting in the first phase of Internet corporate financial reporting, as Internet corporate reporting has been considered the first revolutionary medium of financial communication (Al-Htaybat, 2011b; Beattie and Pratt, 2003; Jones and Xiao, 2003; Lodhia et al., 2004; Oyelere et al., 2003; Xiao et al., 2002). The emergence of Internet reporting as a hyper connective communication medium has improved users' accessibility, interactivity and information availability, which influenced the corporate financial

reporting practices significantly (Al-Htaybat, 2011b). For new mobile technologies to improve corporate financial reporting practices, they must be accepted and used by both providers and users of financial reporting, as their acceptance is vital (Choi et al., 2011; Chung et al., 2013). The objective of this paper is to explore their behaviour and attitude towards the adoption of such technology in corporate financial reporting. Essentially, we seek to determine the factors that matter regarding technology adoption in financial reporting through adopting a qualitative approach. To this end, this paper utilises the *Unified Theory of Acceptance and Use of Technology (UTAUT)* model developed by Venkatesh et al. (2003) as a comprehensive model to investigate and analyse the perceptions of two broad user groups, academics and practitioners, regarding the adoption of smart mobile technology in corporate financial reporting. The remainder of this paper is divided into several sections; the next section outlines the review of prior key studies. Section 3 illustrates establishes the theoretical background and the research questions. Section 4 outlines the research approach, including methodology and data collection and analysis. Section 5 presents the analysis of the data, and finally section 6 provides a discussion of the findings and the conclusion of the study.

2. Mobility and Technological Developments in Corporate Financial Reporting

Although mobile connectivity has been subject of research and invention for the past 100 years, with the first mobile phone having been invented in 1910 (Sørensen, 2011), only in the 1970s/1980s mobility and constant connectivity could be merged when the first car phones were invented (Sørensen and Pica, 2005). Since then constant connectivity regardless of time and location has transformed the work context and conditions in many instances (Sørensen and Pica, 2005). This reflects a societal phenomenon, because mobile connectivity has become an integral part of society and the people that live within it, thus determines the organisational context as well (Sørensen, 2011). Arnold (2003) states that mobile technology is not purely an instrument that fulfils a particular purpose but that it functions at a metaphysical level. This means that it is not just a means to an end but is part of determining means and end, and as such poses both problem and solution, fulfils opposing objectives and creates paradoxical outcomes, which is referred to as the 'janus-faces' of mobile technology (Arnold, 2003). Financial reporting experiences similar janus-faced elements, as published financial information is required, amongst others, to be relevant, reliable, neutral, timely and up to date. In particular, reliability and timeliness are paradoxical requirements, as financial information is more likely

reliable when it is reported as past information, whereas timeliness requires immediate reporting that does not allow for verifying its reliability.

Research of the accounting and technology intersection has long been encouraged (Choe, 2004; Wilson and Sangster, 1992). Corporate financial reporting is one of the most common communication channels available to deliver financial information to external users for financial decision-making (Marston and Shrivies, 1991). Corporations need to appear legitimate in order to raise further financial funds, and this legitimacy is achieved by complying with mandatory requirements, i.e. providing financial information that is required by law or by standards, and by providing additional information voluntarily. Various developments have taken place during the past decades for both mandatory and voluntary forms of financial reporting: standards are continuously being updated to reflect and to adjust to new developments, and companies choose to disclose new forms of information and employ new ways of disclosing their information, in a bid to acquire the desired financial funds.

The need for corporate communication with external users, including current and potential investors and creditors, has risen significantly due to the information asymmetry problem that occurs when different parties involve in the same business transactions, where some are better informed and others are less informed (Cooper and Keim, 1983; Fields et al., 2001; Healy and Palepu, 2001). Providing more information, both required mandatorily and published voluntarily, in corporate financial reporting solves the information asymmetry problem (Cooper and Keim, 1983; Inchausti, 1997). The increased level of competition and of environment uncertainty among corporations leads to disclose more information to attract new investors and funds as cheaply as possible (Lee, 1981). However, the current means of communication, most commonly the traditional financial reporting communication system, is less able to satisfy users' needs as it is not as timely, interactive, or accessible (Lodhia et al., 2004). The emergence of new technological communication methods, such as Internet corporate reporting, provides tools for information exchange on a global scale, offering major opportunities for fast and cheap information transfer (Al-Htaybat, 2011a). Current corporate reporting practices will be transformed to smart mobile reporting, and this approach will also reduce information asymmetry, as users are provided with information faster and regardless of their location, thus corporations reduce the imbalance of available information for external users. The nature of these smart mobile technologies provides users with varying levels of accessibility,

interactivity and research ability, through the use of smart mobile devices.

Smart mobile devices are tablets and smart phones that offer computer capability, phone and digital media ability, Internet connectivity, and the means to run advanced applications at a high speed (Foltin, 2012). Smart devices are individualised devices designed to execute multiple functions, with easy mobility, and easy accessibility to the wireless network environment, light portability, and able to provide new services with a boot-up time short than that of a computer (Poslad, 2009; Lee, 2013). Mobile capabilities or affordances are summarised into various categories to understand the importance of the unique characteristics of mobile- and ubiquitous technology in the business environment: 1) connectivity with others or with remote information services versus purposeful isolation, and able to share information with other devices/systems; 2) portability of devices and services; 3) memory of continuous relationships as opposed to a series of isolated encounters; 4) pervasiveness recording aspects of the service environment; 5) intimacy with users in terms of possibilities for individualization closely associated with users in terms of possibilities; 6) priority as services supporting the stipulation of technology asymmetry, 7) ability to access the Internet or networks; and 8) provision of personalised communication (Kim et al., 2013; Sørensen, 2011). Smart devices have also been developed, to match the mobile technology development, and the new third- and fourth-generation (3G and 4G respectively) devices offer wireless telephone services, mobile video and television, high-speed mobile Internet, video streaming, ultra-broadband Internet access, and many of the basic functions of a desktop or laptop computer (Foltin, 2012). Three major operating systems (OS) are used by smart devices namely: Android, Apple iOS, and BlackBerry OS, with the ability to accommodate a multitude of mobile apps, which are available for downloading (Foltin, 2012).

In the accounting and financial reporting context, smart mobile technology and its related devices are one of the driving forces behind the future global open access to business information and communications. For instance, there are smartphone applications for the financial market that can help investors to make investment decisions regarding buying and selling stocks, tracking their own stock portfolios, creating unlimited numbers of portfolios, providing constantly updated prices, gains, costs, and values of investors' stocks. Another application presents the concurrent top stories in the financial world, overview of the latest financial news, videos and some stock and currency information, (see for instance the web of devices application at

<http://appadvice.com/appnn>). Recently, the Institute of Chartered Accountants in England and Wales (ICAEW) has offered a smartphone application providing a range of features, such as financial reporting news with regular updates and a standards-changes tracker tool (www.icaew.com).

Mobile technology makes maintaining accounting practices easier, faster, and more accurate through providing accountants with a number of relevant mobile applications and accounting-specific software to perform their various job functions from any location (Foltin, 2012). Furthermore, there is a list of vendors and their respective mobile accounting applications, including Thomson Reuters (Mobile CS), Intuit (QuickBook, GoPayment), SAP (Business One), Xamtech (filing XBRL), Micro Strategy, Financial Force, and Apple (iCloud for constant access to information from any device) (Foltin, 2012), thus financial reporting via smart mobile technology is becoming a real possibility. The influence of smart mobile technology and devices on corporate financial information communication is illustrated in the following: increasing the level of connectivity, opening up information exchange on a global scale, offering massive opportunities and advantages to transfer information in a real-time and cost-effective way, which may reduce cost of and time to distribute information, and enhancing the current practices through increasing the direct *accessibility and availability to different quantities of* updated information disclosed to current and potential investors. This paper stipulates that smart mobile technology transforms the current corporate reporting dissemination practices to smart mobile reporting. While the technology is available, how do users perceive and approach such adoption? Several factors have to be considered when seeking to adopt smart mobile reporting, such as context, conditions, culture and user characteristics, as reflected by the UTAUT. This paper seeks to provide answers to these questions. The next section will discuss the theoretical foundation of the current study in more details.

3. Theoretical Foundation and Research Questions

This study's theoretical foundation is the UTAUT by Venkatesh et al. (2003), a model that builds on prior existing models as discussed in the following. The users' behaviour towards the acceptance of new technology innovation was conceptualized and treated as psychological and sociological issues in the information systems literature, which was first employed by the Theory of Reasoned Action (Ajzen and Fishbein, 1980), and Theory of Planned Behaviour (Ajzen, 1985; Taylor and Todd, 1995). These theories were found in the literature of information systems to explain the users'

behaviour towards the adoption. This was extended by Davis' (1989) pioneer work of developing the Technology Acceptance Model (TAM), seeking to explain new technology innovation adoption. Davis (1989) conceptualised the Reasoned Action Theory as follows: the individual's attitude towards the adoption of any new technology is subject to how users perceive the usefulness and the ease of use of the new innovation. This model is employed extensively to explain the users' behaviour towards the adoption of any new technology (Chen et al., 2011; Lee et al., 2003; Park et al. 2007; Phan et al., 2010; Wei et al., 2009).

Davis' (1989) pioneer work was followed by the comprehensive model of the UTAUT by Venkatesh et al. (2003). The model is an aggregation of several models, including the aforementioned models and the Diffusion of Innovations Theory. In the latter, Rogers (1995 and 2003) conceptualized five steps of the adoption process of new technology: in the first step the adopter has an initial *knowledge* about the innovation, secondly the adopter will be persuaded about and will collect information about it, thirdly the adopter will use the information to take a *decision* to adopt or reject the new innovation, afterwards the adopter will *implement* and evaluate the usefulness of such adoption, and finally the adopter will be in the *confirmation* stage, in which they will take the final decision whether to proceed with the adoption.

The UTAUT model by Venkatesh et al. (2003), illustrated in Figure 1, has integrated and unified the characteristics and elements of several prior models and theories in the information systems literature to explain users' behaviour towards the adoption. In order to explore the factors that impact upon adoption, research questions are formulated for each element of the theory. Venkatesh et al. (2003) states four key determinants and predictors of behavioural intention or usage in the UTAUT model, three secondary determinants of use, and four moderators of individual use behaviours that play a significant role as direct determinants of user acceptance and use behaviour. The following addresses the model in detail.

The determinants and predictors of behavioural intention or usage in the UTAUT model include: 1) performance expectancy: the degree to which an individual believes that using a particular system would improve his or her job performance. The idea of performance expectancy in the UTAUT model is similar to the perceived usefulness element in the TAM (Davis, 1989). 2) Effort expectancy: the degree of simplicity associated with the use of a particular system; and it is also similar to the ideas of ease of use and complexity in the TAM (Davis, 1989).

These two perceptions will influence users' attitude to adopt and in turn influence their intentions for actual use of smart mobile devices in corporate financial reporting. Accordingly, the following research questions are formulated:

Q1: Does performance expectancy have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Q2: Does effort expectancy have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

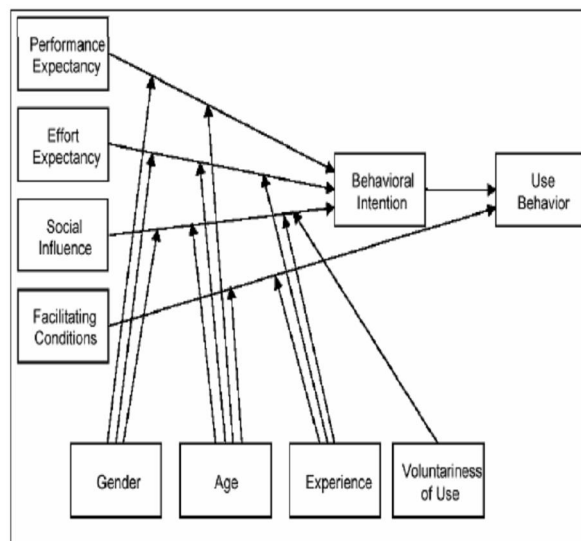


Figure 1: Model of UTAUT (Venkatesh et al., 2003)

Social influence: the degree to which an individual perceives that others believe they should use a particular system. This factor is similar to institutional pressures explaining why users adopt a new technology in practice, (DiMaggio and Powell, 1991). Institutional theory suggests that cultural and social norms drive users to engage in a particular practice, either on the basis of regulatory force, referred to as coercive force, on the basis of copying others in order to remain competitive and be accepted, referred to as mimetic force, and finally on the basis of best practice recommendations, usually issued by professional bodies, referred to as normative force (DiMaggio and Powell, 1991). Based on that social influence is an important factor, which has a significant effect on technology adoption in corporate financial reporting, akin to institutional theory. Social norms drive individuals to adopt a particular practice, e.g. users adopting smart mobile devices in financial reporting practices, in order to gain legitimacy in the view of external structures. In line with this the following research question is formulated:

Q3: Do social influences have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Facilitating conditions: the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of a particular system (Venkatesh et al., 2003). A similar argument was implemented regarding Internet corporate financial reporting in Al-Htaybat's (2011b) proposed e-readiness framework, in which the author states that the technology adoption in corporate reporting is subject to both endogenous and exogenous e-readiness factors. One of the exogenous factors, *e-infrastructure*, includes: network infrastructure, access, affordability, reliability and speed and functionality, which are considered by this framework as driving forces to adopt the Internet as a new innovation in financial reporting. At the macro level this framework considers market forces, such as the level of international trade, investments, level of local technology industry, regulations and culture, as factors that impact on such adoption (Al-Htaybat, 2011b). At the micro level, internal e-readiness elements, such as awareness, commitment, qualified human resources, financial resources, technological resources, corporate governance, sub-culture and legal factors are an important main domain for Internet financial reporting adoption. Al-Htaybat, (2011b) argued that these factors restrain the corporate adoption of the Internet as a new dissemination tool for financial reporting purposes. In line with this the following research question is formulated:

Q4: Do facilitating conditions have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Furthermore, Venkatesh et al. (2003) considered three other secondary determinants: 1) attitude towards using technology: the degree to which an individual believes he or she should use a particular system; (2) self-efficacy: the degree to which an individual judges his or her ability to use a particular system to accomplish a particular job or task, and (3) anxiety: the degree of anxious or emotional reactions associated with the use of a particular system (Venkatesh et al., 2003). Therefore the following research questions are proposed to examine these variables:

Q5: Does users' attitude towards using technology have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Q6: Does users' self-efficacy of using technology have a positive and significant impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Q7: Does users' anxiety of using technology have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

Finally Venkatesh et al. (2003) considered four individual difference variables in the UTAUT model moderated the influence of the four primary model components on behavioural intention. These four moderators include: 1) gender - male vs. female; 2) age - the time of the individual adopting the technology; 3) experience reflecting individuals' prior interaction and knowledge about interactions with similar technologies under adoption, and 4) voluntariness referring to individuals' participation in using technology as either being forced or being willing to try a technology or system.

Q8: Do users' age, gender, experience, and voluntariness have any impact on the behavioural intention and use behaviour of smart mobile technology in corporate financial reporting?

For the purpose of the current study, the UTAUT model is utilised as a comprehensive model that provides the underlying theoretical foundation of the current study by addressing several issues regarding users' adoption of smart mobile technology in corporate financial reporting.

4. Research Approach

4.1 Methodology

The adopted methodology is qualitative one (Burrell and Morgan, 1979; Denzin, 2006; Walsham, 2006), as it focuses on the perceptions of participants (Burrell and Morgan, 1979). Semi-structured interviews were undertaken which lasted one hour per interview. Similar studies in mobile communication are Laukkanen and Lauronen (2005), Luo et al. (2012), and Priporas and Mylona (2008). The data collection and analysis were led by the assumed theoretical background. The current study assumes Venkatesh et al.'s (2003) UTAUT model components on behavioural intention that pressures behavioural use of smart mobile technology in corporate financial reporting. This research approach is used in this paper to collect the perceptions and points of view of academics and practitioners. Participants in both groups were not randomly selected, but were chosen from our database, as they were listed on our database as experts involved in corporate financial reporting and technology developments and they have already participated in three prior surveys regarding technology developments in corporate financial reporting. Initially all 38 short-listed participants were contacted by phone and only 24 were available and agreed to cooperate and to participate in this study. Our participants included ten academics in accounting, four academics in information systems and ten different practitioners, ranging from corporate

financial managers, auditors to corporate accountants. Participants in both groups were included to collect insights into the future of corporate financial reporting from different viewpoints. Academics provide their insights based on their potential theoretical concerns, whereas practitioners provide their insights based on their real experience in the application of smart mobile technology in business. A similar research approach has been adopted more frequently over the past years in accounting (see Ahrens et al., 2008), in Internet financial reporting (see Jones and Xiao (2003, 2004) and Xiao et al. (2002, 2005)), in information systems research (see Walsham, 2006), and in both accounting and information systems research.

4.2 Data Collection and Analyses

The data collection took place during the year of 2012, and the first interview was undertaken based on the interviewee being an expert and an important starting point for the data collection. The first interviewee of this study was an accounting academic with an expertise in financial reporting, and with an interest in Internet voluntary disclosures and modes of disclosure. Data analysis started with the first interview, and in total 24 participants were interviewed with interviews lasting one hour. Participants were asked to give their points of view and perceptions regarding the future potential of smart mobile technology for financial reporting, and potential users' intention regarding the four UTAUT primary model components that pressure behavioural use of smart mobile technology in corporate financial reporting. All participants agreed to be recorded during the interviews, thus transcripts were prepared for the data analysis.

Data analysis took place according to grounded theory's open and selective coding (Glaser, 1993) techniques. Venkatesh et al.'s (2003) UTAUT model is consistent of four key determinants and predictors of behavioural intention or usage, three secondary determinants of use, and four moderators of individual use behaviour play a significant role as direct determinants of user acceptance and use behaviour.

5. Results

This section outlines the findings of the analytical review. They are presented according to the UTAUT's model outline.

5.1 The facilitating conditions

The first of the key determinants of the adoption mindset of smart mobile technology in corporate financial reporting is the facilitating conditions, i.e. the degree to which a user believes that the technical infrastructure exists to support the use of smart mobile technology in corporate financial reporting. This is an important factor that has a significant effect on the adoption.

From the providers'/corporations' perspective

'...I believe that the on-going developments of smart mobile technologies have the potential to change corporations' current strategies of doing business as new technologies require adopting new ways of doing business, especially in a global competitive environment. There are many businesses that adopt smart mobile devices applications and software, and this is increasing', (Participant 7).

The above quote illustrates that corporations are expected to adjust their mindset according to the on-going technological developments. Thus, the more technologies are available, the more businesses will adopt them for their purposes, one of which will be corporate financial reporting. In this context several of the interviewees (5, 9, 13) argued that the new smart mobile technologies have pressured many businesses to effectively position themselves to benefit from such technologies.

'Well, if corporations really adopt smart mobile devices to benefit as much as possible, it will allow access to information, increase the level of communications between a business and its external environment...which will play a core role in creating efficient markets and reduce the information asymmetry problem. I think the root of this problem is the time lag between the insider and outsider and smart mobile communication will overcome this issue' (Participant 9).

Participant (13) stated that *'...I see the following, it will be easy for businesses to reach their stakeholders through mobile communication by sending them ads, promotions, and any financial or non financial information about their financial performance... new products...A lot of this is done already, so the mindset is already supportive, they just have to extend the concept to accounting. I think, this will create an active relation with stakeholders....'*

The next aspect to consider on the corporations' side is the e-readiness in place that supports the adoption of such practices. On the basis of the TAM and e-readiness framework, the next element of the theoretical framework is the electronic infrastructure in place that corporations need to provide financial reporting via smart mobile technology. Thus, corporations evaluate to which extent their internal and external e-readiness levels support the adoption of such technological innovation (Al-Htaybat, 2011b; Greenfield and Rohde, 2009; Molla, 2004; Molla and Licker, 2002, 2005). Molla and Licker (2002, and 2005) have used the phrase internal e-readiness or organisational e-readiness to refer to the managers' perception and evaluation of the degree to which they believe that their organisation has the awareness, resources, commitment, and governance to be ready to adopt e-commerce (Molla

and Licker, 2002, 2005). External e-readiness denotes the managers' perceptions and evaluations of the degree to which they believe that market forces, government, and other supporting industries are able to support their companies to participate in e-commerce (Molla and Licker, 2002, 2005). Similarly, Al-Htaybat, (2011b) argued that the internal and external e-readiness constructs represent the two-dimensional concept of e-readiness for Internet financial reporting, which is contingent upon both macro and micro levels. E-readiness at the macro level is subject to a country's environmental setting, e-infrastructure, and cultural influence, and is evaluated in accordance with the national benchmark (Al-Htaybat, 2011b). E-readiness at the micro level is subject to corporate internal issues such as: awareness, technological resources, business financial resources, qualified human resources, and governance (Al-Htaybat, 2011b).

The concept of e-readiness, and its importance, was also addressed by the interviewees, for instance participant 8 said:

'... No point of talking about mobility of devices if an area has mobile or Internet coverage problems...or unreliable and dissatisfactory services are provided... I think the adoption of such practices is down to the users' overall satisfaction with the availability of smart mobile devices services or plans provided in any country...'

Participant 3 agreed on the external e-readiness and said that:

'... I agree that external e-readiness is a vital factor for corporations and users to get used to such technology, and I think that the availability of a wide range of smart devices' services and providers offering sufficient smart devices applications, with appropriate smart device Internet connectivity will attract everyone to use smart mobile devices in all aspects of business and life in general.'

Importantly, the institutional pressures, reflected in the social influence, play also a role with regard to external e-readiness, as participant 12 argued that *'...legal regulation is an important factor of the external e-readiness, as the country's legal system may not allow for highly and advanced technological communications channels...also country regulation may limit Internet speed, area of coverage...'*, thus impacting on the adoption mindset due to such coercive factors. Regarding internal e-infrastructure, participant 15 argued that *'...I am teaching e-business and the availability of internal infrastructures; including hard and soft applications and operating systems through Internet will make or break any future technological development in the business environment'*, as the appropriate internal infrastructure

is an elementary requirement for the successful adoption of new technological developments.

For instance, participant 6 stressed that *'Wireless and smart mobile devices require businesses to build and maintain their mobile network infrastructure and require a significant immediate investment which may stop the process of adoption.'* Thus, interviewees argued that the providers' decisions to adopt the new technology as a financial reporting communication means will be subject to corporations' and users' awareness regarding the benefits of using mobile devices in order to be connected to your investments. In this context, academic 16 said that:

'... the corporate and investor awareness regarding the benefits of using such technology will increase the chances for this adoption... but if both are not ready to use smart devices as a tool for business communication and information transformation it will remain a distant idea.....culture and the resistance to accept the fact that such technological developments could be part of our daily life are important elements here...you will find people that are scared of the smart device invasion in our life...also you will find people that rely entirely on their smart devices in every aspect of their life...I don't know who's smart here... anyway, the adoption of smart devices need corporate commitment to adopt in terms of providing technological resources, hiring qualified human resources, and allocating specific financial resources.'

5.2 Social Influence and Institutional Pressures

The second general belief was that the participants argued that both corporations and users are expected to consider adopting new technological developments, such as smart mobile communication for financial reporting due to social influence, which was identified in our study as institutional pressures. The participants believed that both corporations and users experience forceful pressure, for instance in highly competitive business environments. Corporations adopt smart mobile technology for financial reporting in order to achieve legitimacy with external investors and creditors, as they want to be perceived as superior by others. For instance, participant number 1 said:

'Competition pushes companies to consider new avenues of reaching investors – so using smart technology to communicate financial information is a new approach that will allow companies to be at the forefront of new developments'.

Furthermore, copying others arose as a causal factor that will influence corporations' and users' mindsets alike – *'smart technology has been gaining momentum over the past few years and a lot of it is trendsetting and keeping up with it – so I would expect*

that once a company starts using smart technology for financial reporting, many others will follow' (academic 8).

Thus, mimetic pressure may drive corporations or individuals to adopt a particular practice, which occurs when corporations or individuals model themselves on the basis of copying others in the same network. Finally, best practice recommendations are a possible driving force, for instance due to professional accounting bodies suggesting the adoption of a particular practice – for instance as the Institute of Chartered Accountants England and Wales (ICAEW) recently suggested (www.icaew.com). Such pressures are labelled normative pressures.

In this context participant 15 said that *'I don't think that corporate reporting via smart mobile technology will enter the world with a big bang...I think that an innovative company will adopt this in order to beat the competition and to be perceived as a leader, perhaps through developing apps. Users will perhaps respond first with disinterest as with so many new developments but eventually it will gain momentum and finally it will establish itself as a common practice, perhaps overtaking the paper-based version of financial reports... This presents challenges for auditing, standard-setting etc. but I think it is about time that we address these issues in our profession...'*

Furthermore, *'users are part of our society and their attitude towards the adoption of smart devices in business could be due to pressure from business partners, and business networks...or even due to smart devices being a status symbol for people in general'* (participant 14).

5.3 Performance Expectancy vs. Effort Expectancy, and Cost-Benefit Expectancy

Performance expectancy and effort expectancy were perceived by our participants as strong elements in determining adopters' behavioural intention towards the adoption of smart mobile technology in corporate financial reporting, however, they stated as a conditioning element their cost-benefit expectancy. Several of the interviewees stated that the adoption of new technology for corporate financial reporting dissemination practices would be subject to managers' perceptions regarding the benefit in relation to the cost of such adoption, and to users' perception regarding cost of smart devices services or plans and the Internet speed provided via these devices were also important elements to impact on both corporations' and users' attitude to adopt smart mobile technology in financial reporting practices. In this context participant 11 said that:

'The interactive nature of smart mobile devices will benefit business as it allows for high

speed interactivity between businesses and external users, and also will open a new window for users to react faster and give their feedback. This in turn will affect their competitiveness. However, no doubt for some companies such investment will be too costly, thus they will not engage in such practices or if so only when costs are significantly reduced. As such, not all users engage in such practices either, and no doubt companies are aware of that too. So if the service they provide is too expensive for their users they will not use it'.

Furthermore, participant 2 stated that: *'Look no doubt smart mobile devices, especially with social media such as Facebook and Twitter, allow companies to have a high level of real-time connectivity with a wider range of its external environment, and providing information would benefit our company, plus I don't think, but I am not sure, that it would take too much to provide such information, but what is the cost involved – not just financially, that is an important factor but also the loss of potentially sensitive information as we would provide info much faster and sooner'*. However, participant 15 raised the following concern: *'I believe in mobility in business...but and this is a big but...they will not find it a costless exercise as they need to allocate financial resources to build their internal infrastructures; which includes hard and soft applications and operating systems through smart devices, and to carry out and maintain their related affairs, collecting and providing reliable information, sorting out any technical issues, adapting specified smart device applications and updating as well as maintaining their smart device applications...'*

Our participants stated that users of financial reporting perceive the adoption of any new mobile communication technological developments as corporations disseminating financial reporting information on the basis of a two-fold perspective: perception of usefulness and perception of usability or ease of use. These determinants and predictors of behavioural intention or usage are adapted from the UTAUT model, both performance expectancy, which is similar to the perceived usefulness element in the TAM (Davis, 1989), and effort expectancy which is the degree of simplicity associated with the use of a particular system and is similar to the ideas of ease of use and complexity in the TAM (Davis, 1989). Our interviewees addressed individual elements, each of which supposes a relationship between each element of usability or usefulness, such as affordability, reliability, speed, functionality, and users' intention of adoption or the actual adoption of new technology in financial reporting.

Based on the above, performance expectancy or the cost-benefit element was integrated in the

current model as managers are expected to compare between the costs of technology adoption and benefits that might arise from such adoption as it may be costly to set up the internal e-infrastructure for such technology, to train human resources to be able to utilise the new technology and raise their awareness, and finally to acquire and install the technology itself. Eventually, corporations will adopt smart mobile technology for corporate financial reporting when their adoption mindset is influenced accordingly on the basis of regulatory or trendsetting factors and when corporations find the appropriate external and create the necessary internal e-infrastructure, provided that costs do not outweigh benefits. The next section will address the users' perspective with regard to smart technology for disseminating corporate financial reporting.

5.4 Individual or Users Difference

Venkatesh et al. (2003) considered four individual difference variables in the UTAUT model moderating the influence of the four primary model components on behavioural intention. Importantly, the current study's findings did not determine the moderating influence on the primary model components, thus they are referred to as user characteristics. These include: 1) gender - male vs. female; 2) age - the time of the individual adopting the technology; 3) experience reflecting individuals' prior interaction and knowledge of interactions with similar technologies under adoption, and 4) voluntariness referring to individuals' participation in using technology as either being forced or being willing to try a technology or system. The participants agreed that the number of users of smart mobile technology is growing rapidly, and that age was not a particular concern. In this context, participant 4 said that:

'It is like smart devices have become a must in our life, not just a must-have, and age is irrelevant, my 67 year old father uses his Blackberry for his daily business activities but he only started this two years ago. My mum is also 67, and she sends me e-mails, and my 6 year old kid forced me to get an iPad because his friends have iPads... also when I walk or teach in the university the iPhone, Galaxy and iPad are everywhere, they are standard equipment for many students in my lectures to download the PowerPoint slides of my courses instead of bringing a printout. I would be surprised if there is anyone that has not thought about at least to getting one. So I would say that users may well use these devices for corporate financial reporting updates soon.'

Furthermore, gender was also not identified as an issue because *'I see both male and female dealing with technology, and I don't think that my male colleagues will prefer mobile corporate reporting more than my female colleagues, and vice*

versa (participant 7). This view is reflective of all participants' responses.

Experience and voluntariness are the two individual characteristics that significantly impact upon user behaviour and use intention of potential users. Both factors lead to an inevitable immediate rejection of a new technology adoption, which is also the case for corporate reporting.

Voluntariness is related to an issue raised by Venkatesh et al. (2003) when they considered the secondary determinants and anxiety, the degree of anxious or emotional reactions associated with the use of a particular system, which transpired as an issue in adopting new technological practices, if such practices are not adopted voluntarily. In this context, our participants addressed other issues, as they argued that usability and usefulness of smart mobile technology could be impacted upon by potential risks of using smart devices based on those devices' features. Lack of experience and not wanting to adopt technology voluntarily lead to associating adoption with too high risk, thus may hinder adoption. Participant 20 reflected on this:

'Users of smart devices may carry a high risk in adopting this technology in their business activities, I am not trying to be suspicious here or anti technology, but users should factor the risk if this service falls below their expectations at the time they may need it. For instance, they may have no coverage or if the network crashed at the time they should use it to sell or buy their shares. How do you think they will feel about it?', and participant 19 added a further point: *'what if you lose your smart devices unexpectedly ...you know my 5 year old took my iPhone and washed it for me, and he told me 'Papa, I cleaned your phone...well he did actually as I was not able to get back any of the data I saved on it'*.

Similar concerns were raised by other academics as they argued that the features of smart devices that can lead to risk of loss, theft or viruses are the high level of connectivity to any network or to other devices, the device's small size and its portability, as it can easily be attacked via network, targeted by viruses, or left anywhere which would lead to a loss of the stored data, especially if they contain sensitive or proprietary organisational data, which will expose the company's information, and its reputation and well-being could be in serious jeopardy.

This section discussed the findings in the context of the UTAUT model. The participants' perceptions are reported in the context of the model's elements and reflect the various characteristics. The next section discusses these findings in the extant literature and considers implications for practice and research.

6. Implications of Findings For Practice and Research, and Conclusion

This study investigated user behaviour with regard to the adoption of mobile corporate reporting. To this end, the study utilised the UTAUT (Venkatesh et al., 2003), and investigated the various factors regarding corporate reporting through smart mobile technology. Facilitating conditions are identified as the continuous technological developments and external e-readiness factors, such as network infrastructure, access, affordability, reliability, legal factors, Internet speed and functionality, and internal e-readiness including corporate awareness, commitment, qualified human resources, financial resources, technological resources, corporate governance, and adopter sub-culture, reflective of Al-Htaybat's (2011) theoretical framework. Social influence was identified as institutional pressures, including coercive, mimetic and normative pressures, which affect users' adoption intent. Venkatesh et al. (2003) considered social influence as an important factor in their model. This is similar to what institutional theory suggests, as social norms drive individuals to adopt a particular practice, here users adopt smart mobile devices in financial reporting practices, under coercive isomorphism pressure, such pressures will be exercised on users by other users or by cultural expectations in the society in which the user is a member (DiMaggio and Powell, 1991).

Furthermore, users' characteristics, such as age, gender, voluntariness of adoption, and experience, were relevant factors that can affect adoption, reflecting Venkatesh and Morris (2000), which was supported by the findings of this study. Age and gender transpired as not relevant but voluntariness and experience are significant factors that may hinder adoption of smart mobile corporate reporting.

Finally, performance and effort expectancy were identified as relevant factors as participants perceived mobile reporting as beneficial to their company but were concerned by the potential effort involved, and added a conditioning factor, labelled cost-benefit expectancy akin to Venkatesh et al's suggestion for the UTAUT2 (2012). They were worried that the cost of mobile corporate reporting was too high, both in actual cost and in potential loss of information.

Our contributions provide implications for practice on several levels: firstly, it addresses an issue that has not reached practice yet as a common application. Thus, it raises awareness and allows practitioners to engage with the concept of smart mobile technology for financial reporting. Secondly, it provides practitioners with an overview of possible

issues that may be relevant when considering such adoption, both on the corporations' and on the users' side. Based on this, corporations can systematically address each of the raised concerns when seeking to adopt smart technology for accounting. Thirdly, regulation and standard setters can set a benchmark of minimum requirements for potential adopters that need to be satisfied which can enhance usefulness and usability. As a contribution to the existing literature, this study has investigated an area that has been neglected significantly in the prior literature, smart mobile technology and corporate financial reporting, and has contributed to this lacuna. A limitation of this study is that it focuses on a small sample, in order to achieve depth of data, thus for future research a large sample should be researched through a statistical study.

To conclude the above, the UTAUT demonstrates the importance of relationships between the dynamic nature of technological developments and corporate financial reporting developments, which is supported by our findings. The research focussed on the perceptions of twenty-four participants, investigating their expectations and observations regarding the future delivery of corporate financial reporting. Thus, this study provides coherent explanations of the current and future utilisation and adoption of corporate financial reporting technological developments on the basis of an existing model. In particular, it provides useful insights into existing and future technological developments' acceptance in the context of financial reporting. It simplifies complex relationships between the different elements of the technological developments, so as to offer future researchers a methodical approach to understanding each aspect and being able to identify any possible lacks regarding the acceptance of technological developments for financial reporting. Finally, this study demonstrates the logical process of accepting any future technological developments that may impact on financial reporting practices.

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References

1. Ahrens, T, Becker, A, Burns, J., Chapman, C., Granlund, M., Habersam, M., Hansen, A., Khalifa, R., Malmi, T., Mennicken, A., Mikes, A., Panozzo, F., Piper, M., Quattrone, P., Scheytt, T. (2008), The future of interpretive accounting research—A

- polyphonic debate, *Critical Perspectives on Accounting* 2008; 19:840-866
2. Ajzen, I. From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behavior* (11-39). Heidelberg: Springer. 1985
 3. Ajzen, I. and Fishbein, M. *Understanding attitudes and predicting social behaviour*, Englewood Cliffs, NJ: Prentice-Hall 1980
 4. Al-Htaybat, K. Corporate Online Reporting in 2010: A Case Study in Jordan, *Journal of Financial Reporting and Accounting* 2011 a; 9(1): 5-26.
 5. Al-Htaybat, K. E-Readiness Framework for Corporate Online Reporting, *Asian Social Science* 2011b, 7 (10): 68-78.
 6. Al-Htaybat, K.; von Alberti-Alhtaybat, L.; and Hutaibat, K. Users' Perceptions on Internet Financial Reporting Practices in Emerging Markets: Evidence from Jordan, *International Journal of Business and Management* 2011, 6 (9): 170-182.
 7. Arnold, M. On the phenomenology of technology: the 'Janus-faces' of mobile phones, *Information and Organization* 2003; 13: 231 – 256
 8. Beattie, V. and Pratt, K. Issues concerning web-based business reporting: an analysis of the views of interested parties, *The British Accounting Review* 2003; 35: 155–187.
 9. Burrell, G., & Morgan, G. *Sociological Paradigms and Organizational Analysis*, Heinemann 1979
 10. Chen, S.C., Li, S.H., and Li, C.Y. Recent Related Research In Technology Acceptance Model: A Literature Review, *Australian Journal of Business and Management Research* 2011; 1 (9): 124-127.
 11. Choe, J. Impact of Management Accounting Information and AMT on Organizational Performance, *Journal of Information Technology* 2004; 19: 203-214.
 12. Choi, H., Choi, Y-J and Kim, K-M The Understanding of Building Trust Model on Smartphone Application: Focusing on Users' Motivation, in Kim, K.J. and Ahn, S.J. (eds), *Proceedings of the International Conference on IT Convergence and Security* 2011: 13 – 20
 13. Chung, K., Jun, M., Han, J., Kim, M. and Kim, J. Antecedents and outcomes of attachment towards smartphone applications, *International Journal of Mobile Communications* 2013; 11 (4): 393 – 411
 14. Davis, F. Perceived Usefulness, Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, 1989; 13 (3): 319- 339.
 15. Denzin, N. *Sociological Methods: A Sourcebook*. Aldine Transaction. ISBN 978-0-202-30840-1. (5th edition) 2006
 16. DiMaggio, P. and Powell, W.W. Introduction, eds. Powell, W.W. and DiMaggio, P., *New institutionalism in organizational analysis*, Chicago: University of Chicago Press, 1991: 1-38.
 17. Evan, D. (2011), 'The internet of things how the next evolution of the internet is changing everything, *White paper, Cisco Internet Business Solutions Group (IBSG)*, [Online] Available http://www.cisco.com/web/about/ac79/docs/innov/LoT_IBSG_0411FINAL.pdf
 18. Fields, T., Lys, T. and Vincent, L. Empirical research on accounting choice, *Journal of Accounting and Economics* 2001; 31: 255 – 307
 19. Foltin, C. Going mobile: It's time for accountants to get smart with their mobile devices, *Strategic Finance* (March), 2012: 28-36
 20. Hanafi, S.R.B.M., Kasim, M.A.B., Ibrahim, M.K.B. and Hancock, D.R. Business reporting on the internet: development of a disclosure quality index, *International Journal of Business and Economics* 2009; 8 (1): 55-79.
 21. Healy, P. M. and Palepu, K. G. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature, *Journal of Accounting and Economics*, 2001; 31 (1-3): 405-440.
 22. ICAEW, *Financial Reporting Faculty app – financial reporting news on the move* [Online] Available:<http://www.icaew.com/en/technical/financial-reporting/financial-reporting-faculty/financial-reporting-app-for-iphones-ipads-android>
 23. Inchausti BG The influence of company characteristics and accounting regulation on information disclosed by Spanish firms, *The European Accounting Review*, 1997; 6 (1): 45-68.
 24. Kumar, S. Mobile communications: global trends in the 21st century, *International Journal of Mobile Communications* 2004; 2(1): 67 – 86
 25. Jones, M.J. and Xiao, J.Z. Internet reporting: current trends and trends by 2010, *Accounting Forum*, 2003; 27 (2): 132-65.
 26. Jones, M.J. and Xiao, J.Z. Internet reporting on the internet by 2010: a consensus view, *Accounting Forum*, 2004; 28: 237-63.
 27. ,J, Lee, H. K. And Taylor, C. (2013), 'Effects of mobile direct experience on perceived interactivity and attitude toward Smartphone application, *Journal of Global scholars of Marketing Science: Bridging Asia and the World*', 2013; 23 (3): 282-296
 28. Kumar, S. Mobile communications: global trends in the 21st century, *Int. J. Mobile Communication* 2004; 2 (1): 67-86
 29. Laukkanen, T. and Lauronen, J. Consumer value creation in mobile banking services, *International Journal of Mobile Communications* 2005; 3 (4): 325 – 338
 30. Lee, T. Developments in Company Financial Reporting: a History and Introduction, In Lee, T., (ed.) *Developments in Financial Reporting*, Southampton, UK: Philip Allan, 1981:1- 26.
 31. Lee, D. (2012) the BBC's technology news' report, on the 5th of October, [Online] Available www.bbc.co.uk/news/technology-19816709?print=true

32. Lee, H. J. A study on business opportunity for small smart devices in finance, *Mathematical and Computer Modelling* 2013; 58 (1-2): 172-177
33. Lee, Y., Kozar, K.A & Larsen, K.R.T. The technology acceptance model: past, present, and future, *Communication of the AIS* 2003;12 (50): 752-780.
34. Lodhia, S.K., Allam, A. and Lymer, A. Corporate reporting on the Internet in Australia: an exploratory study, *Australian Accounting Review* 2004;14 (3): 64-71.
35. Luo, X., Lee, C-P, Mattila, M. and Liu, L. An exploratory study of mobile banking services resistance, *International Journal Mobile Communications* 2012; 10 (4): 366 – 385
36. Marston, C. and Polei, A. Corporate reporting on the internet by German companies, *International Journal of Accounting Information Systems* 2004; 5: 285-311.
37. Molla, A. The Impact of eReadiness on eCommerce Success in Developing Countries: *Firm-Level Evidence, paper No. 18, Development Information*. Working Paper published by Institute for Development Policy and Management University of Manchester. 2004 [Online] Available: www.idpm.man.ac.uk/publications/wp/di/index.shtml
38. Molla, A. and Licker, P.S. PERM: A model of e-commerce adoption in developing countries, In Khosrowpour, M. ed. *Issues and Trends of Information Technology* 2002
39. Molla, A. and Licker, P.S. eCommerce adoption in developing countries: a model and instrument, *Information & Management* 2005; 42: 877–899.
40. Oyelere, P., Laswad, F. and Fisher, R. Determinants of internet financial reporting by New Zealand listed companies, *Journal of International Financial Management and Accounting* 2003; 14 (1): 26-63.
41. Park, Y. and Chen, J.V. Acceptance and adoption of the innovative use of smartphone, *Industrial Management & Data Systems* 2007; 107 (9): 1349 – 1365.
42. Phan, K., Daim, T., Basoglu, N. and Kargin, B. Exploring technology acceptance across countries: case of mobile services adoption in the USA and Turkey, *International Journal of Mobile Technology*, 2010; 3 (2/3): 216 – 231.
43. Poslad, S. *Ubiquitous Computing Smart Devices, Smart Environments and Smart Interaction* 2009 John Wiley and Sons Ltd, United Kingdom.
44. Priporas, C-V and Mylona, I. Mobile services: potentiality of Short Message Service as new business communication tool in attracting consumers, *International Journal of Mobile Communications* 2008; 6 (4): 456 – 466.
45. Rogers, E.M. *Diffusion of Innovations* (4th ed.) 1995; New York: Free Press.
46. Rogers, E. *Diffusion of Innovations*, 5th ed., 2003; Free Press, New York
47. Sorensen, Carsten *Enterprise mobility: tiny technology with global impact on work Technology, work and globalization*. Palgrave Macmillan, Hampshire 2011
48. Sørensen, C. & D. Pica *Tales from the Police: Mobile Technologies and Contexts of Work*. *Information and Organization* 2005; 15 (3): 125 – 149
49. Wei, T. T., Marthandan, G., Chong, A. Y., Ooi, K., and Arumugam, S. What drives Malaysian m-commerce adoption? An empirical analysis', *Industrial Management and Data Systems* 2009; 109 (3): 370 – 388
50. Verma, D. Web-based business reporting in Indian corporate sector, *Journal of Knowledge Management Practice* 2010; 11 (1) [Online] Available: www.tlinc.com/articlsi8.htm
51. Venkatesh, V. and Morris, M. G. Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior', *MIS Quarterly* 2000; 24 (1): 115-139.
52. Venkatesh, V., Morris, M., Davis, G. B. and Davis, F. D. User acceptance of information technology: Toward a unified view. *MIS Quarterly* 2003; 27 (3): 425-478.
53. Venkatesh, V. Y. L. Thong, J., & Xu, X. Consumer acceptance and use of information Technology: Extending the unified theory of acceptance and use of technology, *MIS Quarterly* 2012; 36 (1): 157-178.
54. Von Alberti-Alhtaybat et al. Mapping Corporate Disclosure Theories, *Journal of Financial Reporting and Accounting* 2012; 10 (1): 5-26.
55. Walsham, G. Doing interpretive research. *European Journal of Information Systems*, 2006; 15(3): 320-330.
56. Wei, T., Marthandan, G., Chong, A., Ooi, K. and Arumugam, S. What drives Malaysian m-commerce adoption? An empirical analysis, *Industrial Management & Data Systems* 2009; 109 (3): 370-88.
57. RA Wilson, A Sangster, The automation of accounting practice, *Journal of Information Technology* 1992 7 (2), 65-75.
58. Xiao, J.Z., Jones, M.J. and Lymer, A. Immediate trends in internet reporting, *European Accounting Review* 2002; 11 (2): 245-75.
59. Xiao, J.Z., Jones, M.J. and Lymer, A. A conceptual framework for investigating the impact of the internet on corporate financial reporting, *The International Journal of Digital Accounting Research* 2005; 5 (10): 131-69.