Master Thesis
MSc. Soc. Service Management
Copenhagen Business School 2016

Factors influencing the adoption of mobile recruitment services

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Date: 01/04/2016

150823 characters ≈ 79 pages
01/04/2016

ABSTRACT

Over the years, human capital has gained progressively more and more importance as a fundamental resource for obtaining a competitive advantage. In this context recruiters are facing issues regarding the selection of appropriate recruitment methods in order to ensure the right flow of employees into the organizations, in terms of quality and quantity. The evolution of technologies, like smartphones and mobile internet, affected the way people connect to each other and it made emerge a new recruitment method: mobile recruitment. However, the diffusion of this recruitment solution is still at an early stage, so the purpose of this study was to analyze which factors can influence the adoption of mobile recruitment by organizations. Guided by Decomposed Theory of Planned Behavior (DTPB), the author first reviewed past literature in the field of technology adoption in order to obtain a list of statements that can reflect attitudinal, normative and control factors. These statements were adapted with the help of three recruiters during three semi-structured interviews. The output of the interviews was a questionnaire containing XX statements that were reflecting the usage, behavioral intention, attitudinal, normative and control believes toward mobile recruitment. A sample of 145 recruiters was exposed to the questionnaire. The results revealed that the intention to use mobile recruitment methods is influenced by the attitude of recruiters toward this method, by the pressure receiving from the external, but not by the perceived control of the recruiter over the technology. In turn the attitude of recruiters toward this technology seems to be influenced by certain characteristics of the technology such as compatibility with the company value and experience, relative advantages and complexity in using it. Candidates and competitors were identified as main external subjects who exercise influence to adopt mobile recruitment methods. These results can represent valuable resource to companies that are providing mobile recruitment services to companies in order to gain a better understanding of which factors could influence the adoption of this recruitment method.

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1. Introduction

Over the years, human capital has gained progressively more and more importance as a fundamental resource for obtaining a competitive advantage. Companies, as well as their CEOs, are aware that a lack of talent may impede their growth and compromise their success (Thomas, Steven, L. 2000). In this context, personnel can determine an organization's success or failure. Recruiters, responsible for the key role of drawing human capital into an organization (Barber, Alison E 1998), face significant challenges to guarantee the procurement of qualified employees. In this "war for talents", in which companies fight to attract and hire the most promising workers, recruiters feel substantial pressure to select appropriate recruitment channels and methods (Thomas, Steven, L. 2000). Recruitment channels and methods, which are the front phase of the hiring process, have seen major changes in recent years, especially due to the emergence of new technologies. The diffusion of the World Wide Web has brought several advantages to recruiters, through access to an instrument that can attract and hire candidates more effectively and efficiently than traditional methods (Parry, Wilson 2009). In the same manner, the Internet's diffusion has strongly and permanently affected how companies recruit candidates. Because of this, gaining an understanding of how the increasing diffusion of mobile devices and mobile Internet can affect how companies attract and hire candidates is topic of considerable interest. In 2014, 3.6 billion people had a mobile subscription, accounting for 50 per cent of the world population. In that same year, 2.6 billion people had a smartphone, a penetration rate just under 40 per cent (GSMA 2015). Individuals now spend more time surfing the Internet on their mobile devices than on their personal computers (PCs) (Lella 2015). Although these figures may seem exceptionally large, mobile can still be considered to be at an early stage, especially regarding recruitment (Böhm, Niklas 2012). Surveys carried out by major market players showed that the number of people utilizing their phones for job seeking purposes is strongly increasing (JobVite 2015, Glassdoor 2014). However, recruiters are reacting slowly to this phenomenon and that only a few companies have adopted mobile recruitment strategies. In a survey made by JobVite (2015),

59 per cent of them said that they are not investing in mobile career sites. Sue Weekes (2014) reported that employers are not recognizing the value of pursuing a mobile strategy in their recruitment processes and the impact that can cause to their employer brand. An analysis of the Fortune 500 companies' websites started in 2012 has shown how unprepared those companies are for the shift to mobile web. At that time only 65, out of 500, had mobile optimized career section and of those 65 only 11, around 2 per cent, had a mobile optimized apply process, while only 7 (1.4 per cent) had a native mobile app for careers or jobs (Newman 2012). There has been an improvement in those figures in the last 3 years, but it cannot be considered satisfactory. Indeed in the third quarter of 2014, 261 out of the Fortune 500 companies had a mobile optimized career section, with 87 (17 per cent) of them offering the choice to the candidate of applying directly from the mobile (Newman 2012, Newman 2015) To gain a deeper understanding of this situation, this research first provides a complete explanation of mobile recruitment. Then, guided by technology adoption theories, it aims to determine, from the perspective of recruiters, the reasons behind the adoption of mobile recruitment.

1.1 Motivation

The research is driven by the author's involvement in the field of mobile recruitment. The author has co-founded and developed a mobile app specifically designed for recruitment on mobile devices. This study seeks to better understand recruiters' viewpoints regarding this technology, as well as to identify potential drivers of its adoption. The study's outcome can help managers and implementators in this field to recognise factors that they can leverage to speed the mobile recruitment adoption process.

This research centres on Italian recruiters, a focus which eased the data collection process. However, because Italy is the next market in which the app will be launched, research on Italian recruiters is also of relevance.

Finally, the researcher wants to contribute to an unexplored field of study, in which the current literature is strictly limited. This paper seeks to further develop the literature linked to the adoption of recruitment methods.

1.2 Problem identification

The incredible phenomenon of mobilization has brought deep changes, not only for individuals but also for companies and the services that they offer. Two clear examples are mobile commerce and mobile banking, which now represent important shares of transactions in e-commerce and in the banking sector, respectively (CRR, 2015) . Due to the massive use of smartphones and tablets, mobile technologies are now branching into new areas. One example is recruitment. Statistics show an increase in the number of job seekers looking for jobs on their mobile phones. There has been a similar growth in the number of apps offering support to recruiters throughout the process of attracting and selecting candidates. The problem is that very few recruiters and Human Resources (HR) departments are currently adopting mobile recruitment solutions. The reasons behind this slow adoption have not yet been explored.

1.3 Research question

This research focuses on investigating the factors that influence organizations' adoption of mobile recruitment. Looking at key informants involved in the selection of recruitment methods within their organizations, this study explores their perceptions and opinions regarding the use of mobile technologies to attract and select targeted candidates. More specifically, the purpose of this thesis is to examine the following research question:

> What are the factors influencing the adoption of mobile recruitment among organizations?

1.4 Delimitation of the topic

The study's focus is on investigating factors that might influence the adoption of mobile recruitment from an organizational perspective. The emphasis is solely on this organizational viewpoint, and the paper does not address job seekers' perspectives. Furthermore, as will become clearer in the next chapter, this research only examines the use of mobile apps for recruitment. It does not explore other mobile solutions, such as mobile websites, SMS or phone calls. Finally, the study limits itself to a focus on the Italian city of Milan.

1.5 Structure of the thesis

Figure 1.1 illustrates the study's structure. To being, the above introduction served to establish the project's foundations. Moving onward, a review of theoretical frameworks is preceded by an extended review of the literature in order to coin a definition for "mobile recruitment". Based on the theoretical review, hypotheses are derived regarding factors that influence the adoption of mobile recruitment. These factors are initially explored through three semi-structured interviews. Based on these interviews, several statements are derived and then used together with items from the previous literature to construct a questionnaire. A statistical analysis then transforms data into meaningful findings, which are afterwards presented and discussed. Next comes a discussion of the managerial implications for mobile recruitment providers (MRPs). And, finally, the paper concludes by highlighting the study's limitations and by providing suggestions for further research.

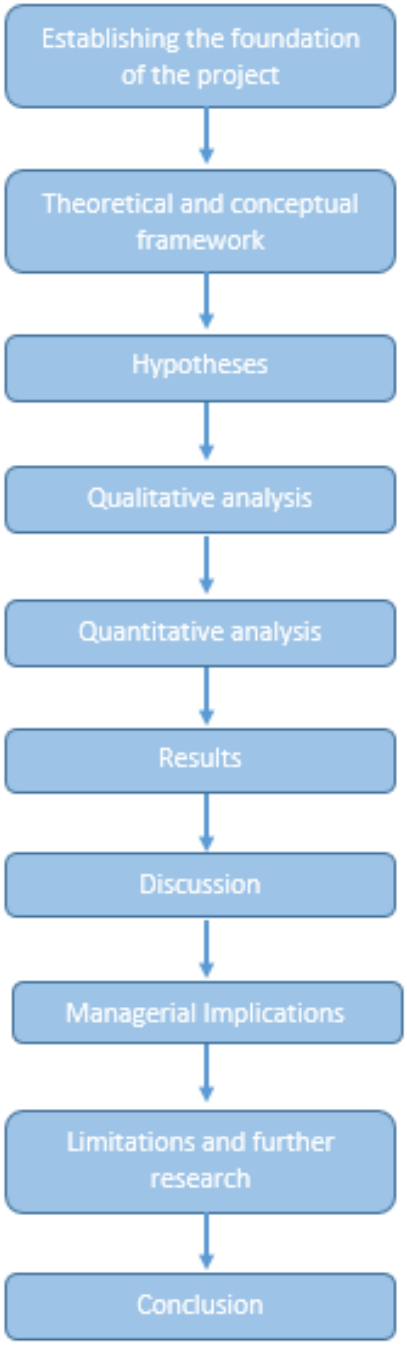

Fig. 1.1 Thesis's structure

2. What is mobile recruitment?

Böhm (2013) defines mobile recruitment as "any organizational information provided for or delivered to a mobile device in order to attract and hire potential applicants". However, this definition is too broad for the purposes of this research for two main reasons. First of all, the recruitment process consists of different activities, some of which have not been significantly influenced by smart mobile device disruption. Secondly, organizational information can be delivered to mobile devices in several manners, but not all of them have been affected by the explosion in the usage of smart mobile devices and mobile internet. Phone calls or texts are used to deliver information to potential candidates, but these methods were already common long before the widespread diffusion of smartphones. Mobile Internet and smart mobile devices, however, provide a wide range of previously unavailable services to both recruiters and candidates. Thus, in order to provide a clear understanding of the term 'mobile recruitment,' this chapter will discuss the phases of the recruitment process that have been affected by the introduction of mobile technologies. Furthermore, it will indicate precisely which technologies have affected each stage of this process.

2.1 Recruitment

The process of recruiting personnel has been widely analysed over the years. The presence of so much research consequently makes it difficult to give a univocal description of the different phases that comprise this process. This thesis will utilize the explanations and definitions provided by various authors in "Managing the Human Resources", edited by Stephen Bach (2005). In the authors' view, the process of attracting, recruiting and selecting candidates refers to a phase of Human Resource Management (HRM), defined as employee sourcing (Newell 2005). Employee sourcing – in contrast to employee development, compensation, performance and work relationships – consists of activities that occur before an individual is

part of the company. Within employee sourcing, Sue Newell (2005) identifies two main activities: recruiting and selection.

Recruiting is “the process of attracting people who might make an organizational contribution to fill a particular role or job”. It consists of several phases:

1. Organizational review and job analysis, which is a systematic review of the organization’s requirements in terms of human resources, followed by an analysis of the job’s requirements;
2. Job description, person specification and competencies, which is the phase in which HR managers specify the job’s particular demands, its requirements and the competencies necessary in the person who will fill the position; and
3. Recruitment methods, which is the selection of methods to attract people who meet the requirements.

Selection is then defined as “the methods that organizations use to select the best applicants”. In contrast to the recruitment process, which is well defined and fairly standard across different companies, selection methods and the sequence in which they are utilized may vary among companies. However, we can identify three main stages:

1. Pre-selection methods, which are typically based on the review of resumes and application forms;
2. Selection methods, which refer to interviews, testing and assessment centres; and
3. Selection and offer, the phase in which the company chooses the right candidate and makes an offer.

The organizational review and job analysis, together with job specification, are primarily internal activities fulfilled by the HR department and departments that have indicated a need for personnel (Newell 2005). The use of mobile technologies at this stage of the process is limited to simple communication among the staff involved. The innovative use of mobile devices in recruitment occurs primarily during the two central phases of the entire process: (1) when recruiters choose methods to attract potential candidates, and (2) when potential candidates are pre-selected.

2.1.1 Recruitment and pre-selection methods

A key decision regarding recruitment methods is whether to recruit internally or externally (Newell 2005). Companies, especially if they are limited in size in terms of employees, decide to recruit from outside of the organization. Sources of external applicants are usually employee referrals, employment agencies (both those that are web-based, like 'Monster' and those that are 'brick-and-mortar') and educational institutions, such as universities (Newell 2005). Recruiters usually use a mix of these channels to increase a position's applicant pool. External recruitment sources can either be designed specifically by and for the organization or be provided by third-party companies (Newell 2005). For example, there are specific sections within company websites in which recruiters can post job vacancies, and candidates can apply. These **career sections** are customised to address recruiters' needs regarding information and media that they want to show candidates and that they want to receive from candidates (Arthur 2012). The alternative is to rely on platforms provided by third-party companies, called **job boards**. Recruiters, against a payment that varies across plans and platforms, can post their companies' job vacancies and reach the wide network of job seekers that use these boards (Arthur 2012).

When enough applications have been received and the gathering process has been closed, the recruitment phase ends, and the selection phase begins. This phase starts with the choice of pre-selection methods. The most common approach is to review and screen the information contained in application folders, usually candidates' resumes and cover letters (Newell 2005, Branine 2008). Although no physical interaction takes place between the recruiter and the candidate, pre-selection methods are crucial in that the majority of candidates are selected during this stage (Newell 2005).

2.2 Mobile

To be considered 'mobile', a technology must have two key components: wireless networking and the associated hardware (Caudill 2007). The wireless networking component allows users to send and receive data without being tied to cables or cords. Fast wireless connections for mobile devices have been made possible by IEEE 802.11, which is the official protocol for Wi-

Fi. In addition, 3G and 4G technologies, which provide users with seamless connectivity across large coverage areas, have played a crucial role (Gass, Diot 2010). Regarding the characteristics of the hardware component, Peters (2005) states that, to be considered mobile, a technology should be:

1. Able to provide communication and/or information functions; and
2. Small enough to be carried; and
3. Able to work (at least part of the time) without a physical connection to power or telecommunications services.

Given this classification, smart MP3 players (like IPod touch) and PDAs can be considered mobile devices. However, due to the decreasing and limited diffusion of these devices in recent years, they will not be included in this research. In contrast, while laptops and notebooks are still popular with Internet users, they are more frequently considered to be portable devices rather than mobile devices. This is because they do not actually fit in a pocket, as mobile devices should (Caudill 2007). The devices that do fulfil all of the requirements to be mobile, and that have seen an incredible growth in their worldwide usage, are smartphone and tablets.

2.2.1 Hardware: Smartphones and tablets

Smartphones are “advanced mobile phones that combine telephony, computing, messaging, multimedia capabilities, higher storage capacities for podcasts, videos, photos, files” (Freitas, Schlemmer 2013). Tablets have basically the same functionalities and capabilities of smartphones. Most of them they have bigger screens, however, and it is not possible to make traditional calls on them. Smartphone and tablets satisfy mobile requirements. Users can maintain a continuous Internet connection through Wi-Fi or mobile data connections. At the same time, smartphones and tablets are easy to carry, able to communicate and are not bound to physical connections, thus meeting all of the criteria for mobile devices. In 2014, 24.5 per cent of the world’s population owned a smartphone, and 20.7 per cent owned a tablet (eMarketer 2015a, eMarketer 2014). When the focus is narrowed to more advanced economies, these per centages are clearly higher. In Western Europe in 2014, tablet users and smartphone users made up 35.3 per cent and 47.3 per cent of the population, respectively

(eMarketer 2015b, UM London, eMarketer 2014). The great rise in the diffusion of these devices is plainly due to the incredible improvement in these devices' capacities, along with the concurrent fall in their average retail price (Bock, Field et al. 2014).

Today, smartphones and tablets can be compared to PCs in terms of capacity. Quinn refers to the four C's of mobile capability, which are content, capture, compute and communication (Quinn 2011). **Content** refers to the possibility for the user to get access to a wide range of media. This content can be dynamic (such as video and audio) or static (such as text and photo). This feature can help to improve relationships between employer and candidates. Mobile devices are not only able to present information but also to **capture** information, thanks to their specific features (Quinn 2011). For example, an integrated camera can capture visual information, and a microphone allows for use of the vocal command, which makes searches easier. And, through GPS, mobile devices can always pinpoint an individual's exact location. All of the information that is inserted or captured is directly **computed** by the smartphone or tablet into a more relevant form of data. Finally, the ability to **communicate** is the fourth capacity of mobile technologies, and Quinn mentions instant messaging, microblogging, text-messaging and VoIP as communication channels (Quinn 2011).

However, further reflection suggests that mobile devices' above-mentioned capacities and functionalities are not really unique, especially as compared to desktop computers or laptops. The latter can also show rich media content, capture information, compute this information into data and communicate with other devices – and in an even more powerful way. However, the real and greatest advantage of mobile technologies over desktop technologies is that individuals can utilize their capabilities anywhere and at any time. This refers to key aspects of the mobile environment: **spatiality** and **temporality** (Kakihara, Sorensen 2002). These factors describe how mobile devices – as well as their users – are not bound by any physical limitations. Users can instantly access online and offline functionalities from anywhere. The combination of mobility (in terms of spatiality and temporality) and computer capacity makes smartphone and tablets very unique. They make people's lives easier and more efficient, in both professional and private contexts, by allowing users to occupy time that would otherwise be wasted (Quinn 2011).

2.2.2 Mobile websites and mobile apps

If smartphones and tablets are the body of mobile technologies, the Internet is most certainly the soul. None of the capabilities mentioned above would be as powerful without the Internet. Browsing jobs on a career website, sending applications or chatting with employers would be not possible without a web connection. Consequently, mobile recruitment would not exist without mobile connectivity. Internet services on smart mobile devices can be offered in different manners, but Kaasien organises these into two categories, depending on the degree to which the service is specifically designed for mobile. Individuals can access general services developed for PC browsers that have also been adapted for mobile, or they can use services specifically designed for mobile devices. This classification is portrayed in the framework presented below.

As seen from the framework, Internet services can be accessed by mobile devices in two main ways:

- Mobile websites, accessing the browser of the phone; and
- Mobile apps, which are standardised pieces of software specifically developed for mobile devices.

2.2.2.1 Mobile websites

Content that has been conceptualized and developed to be viewed on a PC is normally shown on a mobile device through two kinds of mobile websites: friendly and optimized. People often think that mobile-friendly websites and mobile-optimized websites are synonymous, but this is not the case.

Mobile-friendly is the most basic mobile website solution. While mobile-friendly websites work for all mobile users, they have been designed for desktops. Thus, mobile-friendly websites appear smaller on smartphones and may not be totally responsive on tablets. Furthermore, functionality within websites can be limited, because programming was for desktop computers.

Mobile-optimized websites are a more advanced version of mobile-friendly websites. As the name suggests, they offer an optimized version of desktop websites for mobile devices. Website reformatting provides mobile users with improved navigation. The design of mobile-optimized websites is very different from that of the desktop website. All of the tabs and content from the desktop website are not present, but the mobile-optimized version is more "thumb" friendly, thanks to larger and easier touches. Cloud technology allows users to utilize mobile-optimized websites to upload resumes and cover letters directly from Dropbox. In this way, users can complete job applications directly from their mobile devices. The figure 2.1 below shows the difference between a mobile-friendly website (left) and a mobile-optimized website (right).

Fig. 2.1 Mobile Friendly vs Mobile Optimized

The *Responsive Design Website* (RDW) represents another solution to adapt a website to the smaller size of mobile screens. Unlike the two previously discussed types of websites, RDWs are not specifically developed for mobile devices. Rather, they are completely flexible, regardless of device. The crucial feature of websites that make use of this design is that they adapt to the size of the screen without needing to detect the type of browser or the type of device. RDWs share the strong points of mobile-friendly and mobile-optimized websites. Like the former, they show most of the original website's content, and, like the latter, they provide good usability. However, any mobile website provides functionalities and usability that cannot be compared to what mobile apps have to offer.

2.2.2.2 Mobile apps

When it comes to the digital world, an application, or 'app', is a "standardised piece of software that runs on a computing platform". Companies can develop two kinds of apps: hybrid and native. Hybrid apps are the connecting bridge between mobile websites and mobile apps. As the name suggests, they are a solution that offers a synthesis of mobile websites and native apps. Hybrid apps are a less expensive and easier way for companies to both maintain a presence in the various app stores and take advantages of many of the features provided by mobile devices (e.g. cameras or push notifications). However, they are still more similar to mobile websites, since they are developed using the same code paradigm used to build websites (HTML, CSS and Javascript). Building a hybrid app is less expensive and quicker, because the same code can be reused for different mobile operating systems. However, such apps do not provide the same user experience and wide access to functionalities as do native apps.

In contrast, native apps are developed specifically for mobile devices and their operating systems, with no need to make them 'friendly' or 'optimized'. This allows them to fully exploit the capacity of the mobile processor and memory, making the user experience faster and smoother. In addition, within a native app, users can also have easy access to all smartphone-specific features. Better performance, together with the possibility to fully exploit the functionalities of smart mobile devices, make native apps the best solution when an organisation wants to provide users with a service requiring high interactivity, high

personalization, complex calculations or reporting, and access to the devices' native functionalities.

The previous paragraphs have clarified the phases of the recruitment process that this research will cover, as well as the devices on which it will focus. Based on this information, I am now able to define mobile recruitment as:

"any organizational information provided for or delivered to a mobile app for smartphones and tablets, in order to attract potential candidates and pre-select them".

3. Theoretical framework

Tools and technologies used in recruitment practices have undergone an incredible evolution in past years (Girard, Fallery 2011) (Lengnick-Hall, Moritz 2003) (Kay 2000). Mobile recruitment seems to be the latest trend, especially due to the widespread use of smartphones in both private and professional life (Böhm 2013, Böhm, Niklas 2012). However, although certain companies have already optimized their recruitment processes to make them suitable for mobile candidates, the majority has not. Therefore, it would be interesting to understand, from an organisational perspective, what factors drive or impede the adoption of mobile recruitment. Most research on mobile recruiting has focused on job seekers, and only a very limited number of papers have addressed mobile recruitment from the standpoint of recruiters. Furthermore, no analysis has examined the adoption of mobile recruitment by organizations. Böhm and Niklas are the most active in researching this topic. In 2012, via a survey of German HR managers, they analysed the extent to which HR departments are already using mobile recruitment, along with the perceived benefits and challenges of this tool. Nevertheless, their study did not investigate factors that might influence companies' adoption of mobile recruitment (Böhm, Niklas 2012). The rest of the literature has focused on the perspective of job seekers. Studies have analysed, for example, job seekers' behaviour and their expectations toward job board apps, presenting implications for HR managers and for the providers of job boards (Böhm 2013). Similar research has evaluated which factors could

determine the intention to use mobile job boards by job seekers, but has not explored the recruiters' point of view (Niklas, Böhm et al. 2012).

Since there is not literature regarding the adoption of mobile recruitment from an organizational perspective, literature from outside this area is instead used for this research. The most popular theories used in the analysis of technology adoption are: the technology acceptance model (TAM) (Davis Jr 1986, Davis 1989, Davis, Bagozzi et al. 1989), the theory of planned behaviour (TPB) (Ajzen 1985, Ajzen 1991), the technology-organization-environment framework (TOE) (Tornatzky, Fleischer 1990) and the diffusion of innovation theory (DOI) (Rogers 1995, 2010). All of these theories have elements in common: indeed, they have been unified in a unique model – the unified theory of acceptance and use of technology (UTAUT) (Venkatesh, Morris et al. 2003). Among these theories, the only ones that have been used to analysed adoption behaviour at firm level are the TOE framework, DOI and TAM (Oliveira, Martins 2011, Davis Jr 1986). However, it can be argued that the decision to adopt a recruitment method is primarily driven by the individual, such as an executive recruiter or the decision-maker within the HR department (Parry, Wilson 2009). Individuals, according to Szewczak and Snodgrass (2002), play a key role in the adoption of new technologies in any organization. Decision-makers make the actual choices regarding which Information System (IS) should be implemented to achieve certain goals for their organizations (Alfahl, Sanzogni et al. 2012). That said, although executive HR managers are the ones that decide whether to adopt mobile technologies in their companies' recruitment processes, they are not the individuals who use the technologies in practice. For this reason, the role of lower-level recruiters is taken into consideration through use of a theoretical framework that includes the role of subordinates in the adoption process. To that end, this research relies on an integrated version of DOI theory, TPB and TAM: The Decomposed Theory of Planned Behaviour (DTPB) (Taylor, Todd 1995a, Taylor, Todd 1995b). Before presenting the DTPB, it is important to give a brief overview of the three models on which it is based. Then, the three models will be compared, with the goal of explaining why Taylor and Todd's framework is the best instrument to evaluate the adoption of mobile recruitment.

3.1 Theory of Planned Behaviour

Theory of Planned Behaviour (TPB) is a widely accepted theory to predict consumers' adoption intentions – in this case, the adoption of mobile recruiting. The TPB is an extension of the Theory of Reasoned Action (TRA), which was developed to predict, explain and influence human behaviour (Ajzen, Fishbein 1977, Ajzen, Fishbein 1980). TRA looks to behavioural intentions, which are directly influenced by the *attitude* toward the performance of a certain behaviour and by *subjective norms*. Here, an HR manager's attitude toward mobile recruiting could influence the company's intent regarding the adoption of this tool. According to Ajzen, the *attitude* toward a behaviour refers to "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question". A perceived range of benefits from the use of mobile recruitment can result in a recruiter's favourable evaluation toward the adoption of mobile solutions. For example, a recruiter could anticipate that mobile recruitment might lead to better employer branding or access to a wider pool of talent. The choice to recruit through mobile devices can be influenced not only by personal beliefs, but also by perceived external social pressures, defined by Ajzen and Fishbein (1980) as subjective norms. External social pressures can vary across individuals. This section later explores the literature related to this topic to identify the external social pressures related to the adoption of mobile recruiting.

In turn, both attitudes and subjective norms are influenced by salient information or beliefs relevant to the behaviour. Thus, behavioural beliefs and normative beliefs are the antecedents of attitude and subjective norms, and they indirectly influence one's intentions in performing a certain behaviour. Behavioural beliefs are linked to the subjective probability that a behaviour will produce a certain outcome. For example, regarding mobile recruiting, this outcome could take the form of strengthening the employer branding of a company. In contrast, normative beliefs refer to the perceived expectations of an individual's influential circle (Ajzen, Fishbein 1980). In the case of mobile recruitment the influential circle of a company can be represented by job seekers and the competitors of the company.

The reason why this research is not based on TRA is due to the theory's greatest limitation: TRA assumes that the individual – in this instance, an HR executive – has total control over the

behaviour (Ajzen 1991). However, this is not the case as regards this study. As mentioned above, executives might be the ones that decide to adopt the technology, but they are not the ones actually using it. For example, a lack of knowledge on how to use mobile recruiting or a lack of smartphones among HR department employees could prevent those people from making use of the technology. These variables, along with multiple other factors outside of executives' control, can be critical in evaluating the adoption of such technologies.

In order to address this problem, Ajzen (1985) proposed TPB, adding a third component: perceived behavioural control (PBC). While the performance of a behaviour is strongly linked to the motivation-intention of an individual in actually performing the action, there are non-motivational factors that can prevent someone from behaving in a certain way (e.g. time, money, skills, cooperation with others and etc.) (Ajzen 1991). Ajzen claims that PBC refers to "people's perception of the ease or difficulty of performing the behaviour of interest", and it is assumed to reflect "past experience as well as anticipated impediments and obstacles". Similar to attitude and subjective norms, PBC is also influenced by beliefs. These are defined as control beliefs, which are beliefs linked to the perceived presence of factors that may facilitate or impede performance of the behaviour (Ajzen 1991). The figure 3.1 is a representation of TPB and helps to visualize Ajzen's model.

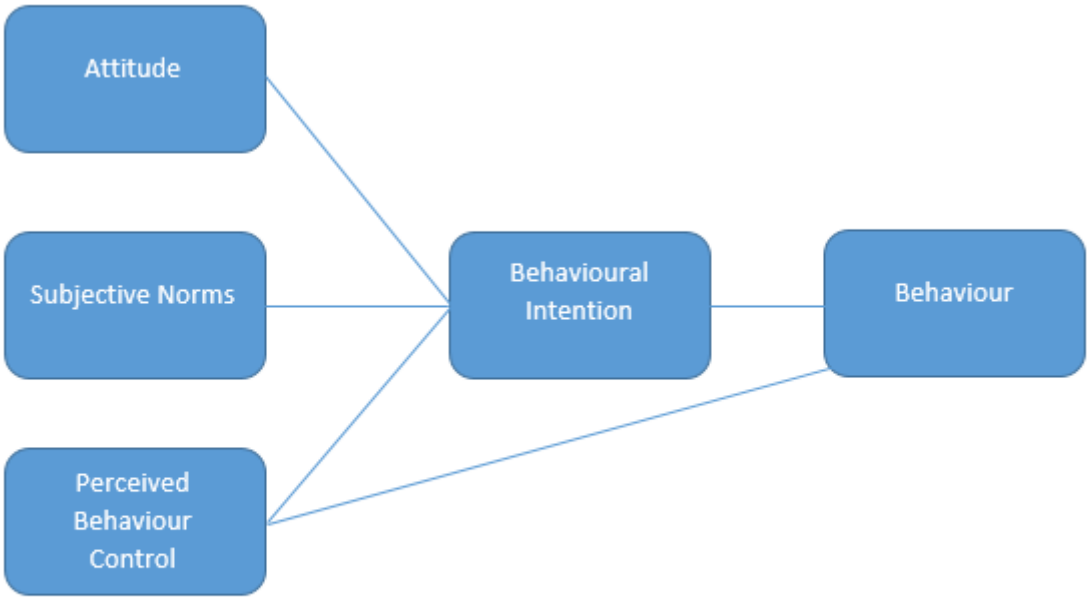

Fig. 3.1 Theory of Planned Behaviour

3.2 Technology Acceptance Model

As an extension of TRA, Davis (1986) proposed the Technology Acceptance Model (TAM). TAM's goal is to better understand determinants of user computer acceptance and to help designers and implementators evaluate new systems prior to implementation. Similar to TRA, the behavioural intention – and thus the behaviour itself – is directly influenced by one's attitude toward the behaviour. In TAM, this is specifically defined as the "attitude towards using". Concerning the formation of this attitude, Davis posits two fundamental factors: Perceived Usefulness (PU) and Perceive Ease of Use (PEOU). PU refers to "the degree to which an individual believes that using a particular system would enhance his or her job performance". Like TRA, TAM states that individuals are more proactive in using an application to the extent that it can help them to better perform their job (Davis 1989). Recruiters' main responsibility is to attract valuable candidates to their organizations. Thus, they would likely perceive as valuable a tool that could help them to reach a wider pool of job seekers or that could improve the efficiency of their candidates' research. Recruiters would be apt to view such a technology as a tool that could improve their job performance. In addition to PU, PEOU is also a factor that influences a technology's adoption. Davis defines PEOU as "the degree to which an individual believes that using a particular system would be free of physical and mental effort". The concept is fairly straightforward: the easier a technology is to use, the more likely individuals within an organization will be to use it. The figure 3.2 helps illustrate how the two attributes of the model influence computer usage.

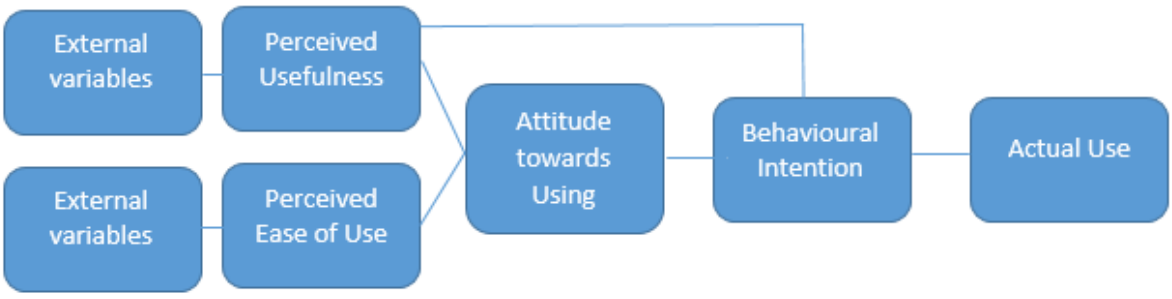

Fig. 3.2 Technology Acceptance Model

As we can see, PU is both an independent and dependent variable in the model. On the one hand, it influences behavioural intention. On the other hand, it is simultaneously predicted by PEOU. PU's influence on BI is not only indirect (via attitude) but also direct. This PU-BI relationship is based on the idea that people form intentions toward a behaviour they believe will increase their job performance independently of any positive or negative feelings that may be evoked (Davis, Bagozzi et al. 1989). The model's external variables "provide the bridge between the internal believes, attitudes and intentions represented in TAM and the various individual differences, situational constrains and managerially controllable interventions impinging the behaviour". These are sets of variables, including objective system design characteristics, training, user involvement in design, system quality and experience (Davis Jr 1986). A big difference with TRA is the lack of subjective norms (SN) as a variable in the model. Davis (1989) motivated this choice, stating that even Fishbein and Ajzen (1975) affirmed that subjective norms are one of TRA's least understood aspects. This is because it is difficult to prove whether effects are direct (via behaviour intention) or indirect (via attitude), due to the internalization and identification process (Davis 1989).

3.3 Diffusion of innovation theory

The diffusion of innovation (DOI) theory proposed by Rogers (1995) is one of the most used theories for predicting the diffusion of a certain technology. This research focuses solely on the attributes of the innovation itself, which comprises only a piece of DOI theory. Rogers describes the innovation-diffusion process as "an uncertainty reduction process", where an innovation's attributes have the important role of decreasing the uncertainty regarding it. The attributes that Rogers proposed are not classified by experts but are rather attributes perceived by the potential adopter. According to Rogers, those attributes can explain 49-87 per cent of variance in the adoption rate, which is the "relative speed with which an innovation is adopted by members of social system". Together with attributes, the innovation-decision type, communication channels, social system and change agents can help to reduce uncertainty about adopting an innovation. The attributes proposed by Rogers are:

- Relative Advantage: the degree to which an innovation is perceived as better than the idea it supersedes;

- Compatibility: the degree to which an innovation is perceived as consistent with existing values, past experiences and needs of potential adopters;
- Complexity: the degree to which an innovation is perceived as relatively difficult to understand and use;
- Trialability: the degree to which an innovation may be experimented with on a limited basis; and
- Observability: the degree to which the results of an innovation are visible to others.

According to Rogers, innovations offering more in the way of relative advantage, compatibility, simplicity, trialability and observability will be adopted faster. However, research has proven that only the first three attributes are related to an innovation's adoption (Wu, Wang 2005), and Rogers (2003) suggested that relative advantage is the strongest predictor among the five.

3.4 The decomposed theory of planned behaviour

Taylor and Todd (1995) conducted two studies related to the decomposition of the theory of planned behaviour (DTPB). In the first study, they proposed a decomposed version of TPB and analysed the validity of this model compared to TRA. In the second, they compared it to TAM. These studies found the DTPB to have a better predictive power of the antecedents of behaviour as compared to TAM and TPB. In the previous literature, the only study related to recruitment based on the DTPB was an analysis of job seekers' intentions in using job search websites (Lin 2010). However, the DTPB has been widely used to evaluate the adoption of different technologies, particularly at an individual level rather than from an organizational perspective. For example, Tan and Teo (2000) used the DTPB to identify factors influencing the adoption of Internet banking in Singapore. Similar research was conducted by Shih and Fang (2004), but with a focus on Taiwan. However, research evaluating the adoption of mobile technologies and services is fairly limited. The DTPB has been used to test factors influencing the adoption of mobile banking in Iran (Kabiry, Forghani 2013) and also for an exploratory study of mobile commerce service adoption (Pedersen 2005). When it comes to organizational adoption, the DTPB has been used as a framework for analysing the factors in using a new

service developing tool (Jin, Chai et al. 2012) or in using instant messaging in organizations (To, Liao et al. 2008).

The DTPB is an extension of TPB. Unlike the latter, the model decomposes beliefs toward the antecedents of behavioural intention, such as attitudinal beliefs, normative beliefs and control beliefs. These influence attitude, subjective norms and perceived behavioural control, respectively. The decomposition made by Taylor and Todd takes place at the level of beliefs, because, as several researchers have pointed out, decomposing beliefs into multidimensional constructs is more appropriate than opting for a unidimensional constructs. Indeed, it is unlikely that a monolithic belief structure, representing a variety of dimensions, will be consistently related to the antecedents of intention. Instead, the decomposition helps to clarify the relationship among the antecedents of the behaviour. Furthermore, it provides a set of beliefs that can be applied across a variety of settings.

Attitudinal Belief*.* In decomposing the attitudinal belief or behavioural belief, Taylor and Todd refer to the perceived characteristics of innovation as proposed by Rogers, so relative advantage, compatibility and complexity, by excluding trialability and observability. These characteristics were described in the previous section.

Normative belief. According to Ajzen (1991), normative beliefs are "concerned with the likelihood that important referent individuals or groups approve or disapprove of performing a given behaviour". In the decomposition of those beliefs, Taylor and Todd (1995) identify three referent groups that can be relevant in an organizational setting: peers, superiors and subordinates.

Control beliefs. In decomposing control beliefs, Taylor and Todd (Taylor, Todd 1995b) refer directly to Ajzen's (1985, 1991) discussion of constructs. In explaining PBC, he says that it is very compatible with the internal notion of individual "self-efficacy" proposed by Bandura (1977,1982). This concept "is concerned with judgments of how well one can execute courses of action required to deal with prospective situations", or, in other words, an individual's confidence in his or her ability to perform a certain behaviour (Ajzen 1991). In addition to the internal notion, PBC is also related to external conditions constraints. These are identified by Ajzen in the Triandi's "facilitating conditions", which are factors in the environment that

impede or promote an act. According to Taylor and Todd (1995b), facilitating conditions present two dimensions for control beliefs. The first such dimension is related to resource factors, such as time and money, while the second is concerned with technology compatibility issues that might prevent usage. Higher levels of self-efficacy and the presence of facilitating conditions will clearly lead to higher levels of behavioural intention and technology usage (Taylor, Todd 1995b). Parry and Wilson (2009) initially compared perceived behavioural control to Roger's "complexity" factor; however, their research has not explicitly investigated PBC. Self-efficacy, and thus PBC, differs from the "complexity" proposed by Rogers, because it refers to the individual's perception of his or her ability to perform the behaviour and not to an attribute of the innovation itself. In order to express self-efficacy in the adoption of mobile recruiting, factors will be adapted from research on the adoption of mobile banking (Gu, Lee et al. 2009).

The figure 3.3 helps to visualize the theoretical framework that will be used to evaluate the factors influencing the adoption of mobile recruitment.

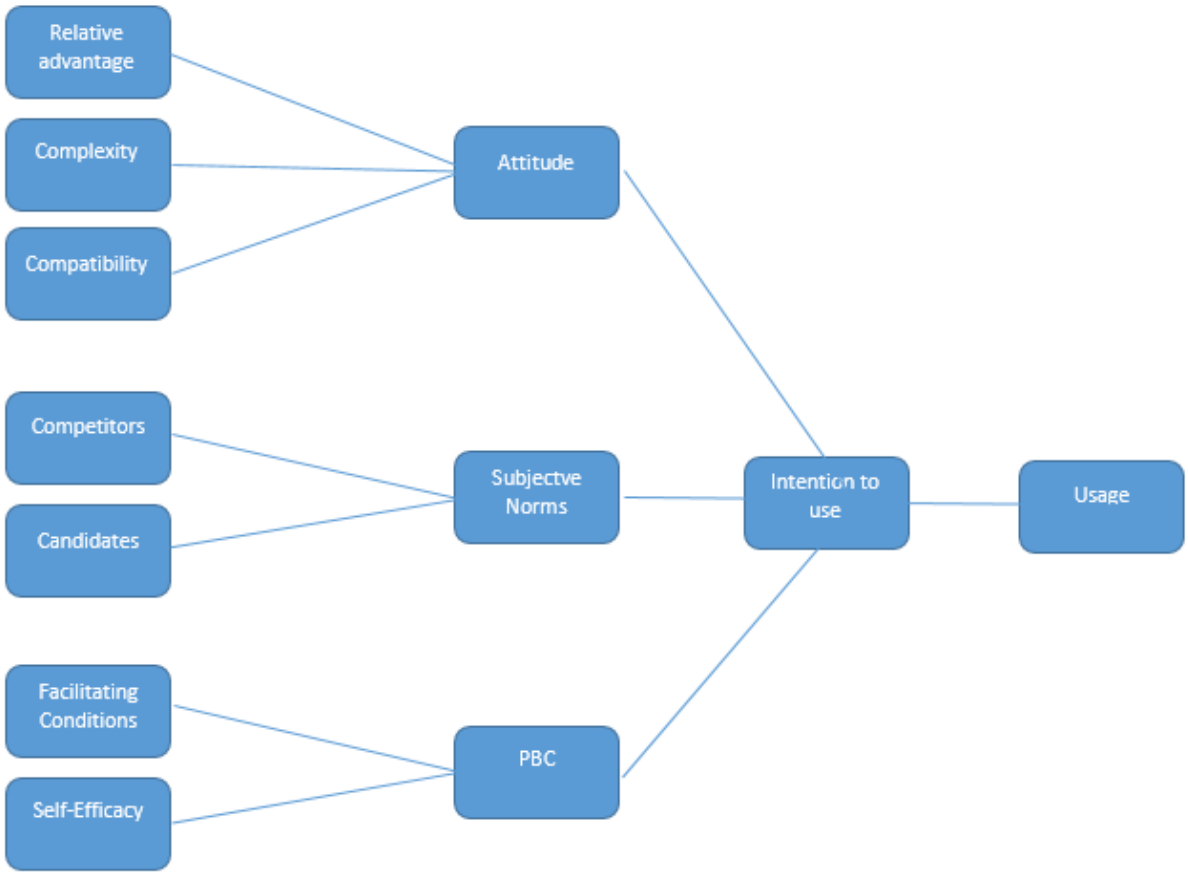

Fig. 3.3 Decomposed Theory of Planned Behaviour

3.5 Relationship between the four theories

The theories presented above show several key similarities and differences. First of all, a distinction should be made between the behavioural theories (TAM, TPB and DTPB) that focus on individuals' behaviour and DOI. Even though DOI originates from different disciplines, it shows clear similarities with the others. Some of the attributes described by Rogers, such as "relative advantage" and "complexity", have been often compared to TAM's PU and PEOU, as proposed by Davis (Chen, Gillenson et al. 2002, Wang, Meister et al. 2012). Same as been done with TPB, where the positive or negative beliefs that influence the attitude toward a behaviour have been compared to "relative advantage" and "complexity" (Parry, Wilson 2009). For instance, the perceived improvement in employer branding when the company offers mobile recruitment solutions to its potential candidates could be equally defined as a "relative advantage" or as a "perceived useful" strategy for the company.

In DOI, an innovation's attributes establish the formation of a positive or negative attitude toward it. However, how the formation of these attitudes flow into acceptance or rejection of the innovation is not well explained (Chen, Gillenson et al. 2002). So, in more practical terms, DOI does not explore, for example, how the perception that recruitment apps could lead to an improvement in employer branding evolves into to the actual adoption of this technology. Adoption theories fill this gap, creating a bridge among beliefs, attitude, intention and action/adoption (Al-Qeisi 2009). This is why DOI is often used together with adoption theories like TAM and TPB. In this research, Roger's proposed attributes of innovations are also integrated in the decomposition of the attitude toward mobile recruiting.

Even though TAM and TPB are both extensions of TRA, some substantial differences exist. One of them is the lack of the subjective norms construct in the TAM model. As we have seen before, Davis (1989) believed that external pressure from influencers is internalized in an individual's attitude toward a behaviour. While I partially agree with Davis (1989) regarding the internalization of these external pressures, for the purpose of this research it would be better to treat them separately from the other constructs influencing the adoption of mobile recruitment. This is because in past studies they have been found to be strong motivational factor in the adoption of technologies in recruitment practices (Parry, Wilson 2009).

Another important difference between TAM and TPB is the concept of PBC. When evaluating of the adoption of mobile recruitment, certain factors (e.g. time and the budget required for implementation) can be considered part of PU and PEOU. For example, if the implementation of mobile technologies in the recruitment process is perceived as too expensive or too time consuming, its PU can drastically decrease. However, other factors, which are not directly linked to the perception of who will adopt the technology, can play a role (Taylor, Todd 1995a). For example, the availability of smartphones among HR employees would likely not change perceptions regarding the advantage of mobile recruitment. However, a lack of smartphones could represent a strong barrier to the implementation of such technology in the organization. Therefore, it makes sense to separate: (1) factors that are not properly under the decision-maker's control, and (2) factors that are closely linked to perceptions that the decision-maker has toward the innovation.

In contrast to those differences, both TAM and TPB present unidimensional constructs to explain what influences the intention to perform a certain behaviour (Al-Qeisi 2009, Taylor, Todd 1995b). Keeping the constructs "composed" can undermine the analysis of beliefs, external subjects/pressures and barriers that can influence the adoption of mobile recruitment in practice. Conversely, decomposition offers a comprehensive approach to understanding the factors affecting a person's decision to use technology information. In addition, the decomposition of attitude allows DOI to be integrated into the theoretical framework, thus increasing the predictive power of the adoption (Taylor, Todd 1995b).

Based on the above-mentioned characteristics of the theories and models that have been presented, the rationale for choosing DTPB as the theoretical foundation is as follows: (1) the adoption of mobile recruitment is not entirely under HR executives' control. This condition satisfies a core assumption of the DTPB that the presence of constraints can inhibit both the intent to perform a behaviour and the behaviour itself; (2) Social influence is an important determinant of behaviour; (3) Individuals' self-efficacy and facilitating resources are possible barriers to user adoption of mobile recruiting; and (4) This model is an appropriate means for providing concrete managerial implications for practitioners. Furthermore, it can effectively elicit mobile recruitment users' salient belief structures and acquire stable, easily understood and managerially relevant factors.

3.6 Applying DTPB to mobile recruiting

This section applies and adapts the DTPB framework to mobile recruiting. To that end, recruitment studies, along with other literature, have been reviewed. As mentioned above, Taylor and Todd's decomposition takes place at the beliefs level, and it influences all antecedents of the behavioural intention. These include attitude, subjective norms and PBC.

3.6.1 Attitudinal Beliefs Decomposition: Relative advantage, compatibility and complexity.

Relative advantages. Taylor and Todd linked the notion of relative advantage to the attitudinal believes of TRA and TPB that usually identify the advantages and disadvantages of performing a certain behaviour. We can gain insights about the relative advantages of mobile recruiting not only from literature strictly related to that topic but also from articles related to mobile technologies in general.

One of the most cited advantages of using mobile for recruiting candidates is the possibility to access a smartphone anywhere and at any time (Niklas, Böhm et al. 2012, Böhm 2013). Without being tied to workstations, employers can review candidates' resumes and applications, directly chat with them and then share this information with their colleagues.

Likely because it affords the opportunity to always be 'on,' regardless of time and location, mobile is perceived as a faster way to recruit. Performing actions on mobile that were previously conducted offline or from a desktop computer has incredibly accelerated many processes. A great example is mobile banking, a topic that has been widely debated among researchers (Gu, Lee et al. 2009, Kabiry, Forghani 2013, Zhou, Lu et al. 2010). The ability to easily access banking services and to conduct transactions at any place and at any time was found to be a consistent advantage for adopters. Mobile banking significantly decreased the amount of time necessary to accomplish banking activities (Gu, Lee et al. 2009, Zhou, Lu et al. 2010).

Push notifications are another key smartphone feature that facilitates communication between employers and potential candidates (Thomson 2014).In technical terms, push

notification systems “act as a method of notifying the handset an installed application has data waiting for it from an external system” (Shaw 2011). This means that job seekers can get a special message on their smartphone whenever a recruiter has contacted them, has reviewed their application or simply whenever they post suitable job vacancies.

The possibility to always be ‘on’ and to easily communicate with potential employees cuts recruiters’ idle time. It thus renders the recruitment processes more efficient than conventional desktop-based processes (Böhm 2013).

Mobile recruiting not only improves efficiency in the recruitment process but also efficacy. It does so through its attraction of the most suitable candidates. Indeed, another relative advantage mentioned by researchers regards a core feature of smartphones: geolocalization. The GPS present in smartphones allow devices to be located with great accuracy, and this can help recruiters target potential candidates only in the specific area where they are hiring (Gupta 2014). Furthermore, targeting in job postings are not limited to simply specifying the location of the job, and thus, the job seekers. Specific worker characteristics can be targeted as well. When recruiters use social media, like Facebook or LinkedIn, they can show the ad only to people with certain skills or features. These characteristics could be, for examples, experience in a specific sector or certain interests that reflect the position or the company culture. Targeting job posts to people that meet specific criteria can increase the chances of finding the most suitable candidate, hence improving the efficacy of the recruitment process.

However, while quality is important for recruiters, so is quantity. Mobile is also as a way to increase the reach of the candidate pool (Böhm, Niklas 2012, Niklas, Böhm et al. 2012).

The adoption of mobile for recruitment purposes can improve efficacy and efficiency, speed the hiring process, and expand outreach to candidates. Additionally, several studies have found that it is also a way for companies to strengthen their employer branding. Offering mobile solutions in attracting and hiring candidates helps them to engage more with the companies and to hold their interest in job opportunities (Career Builder 2013). A company that implements mobile recruitment can see an improvement in its popularity among job seekers, while at the same time projecting the image that it is up-to-date with the latest trends.

Complexity. The second factor concerns the perceptions of the adopters (in our case, recruiters) about the degree of difficulty involved in using mobile recruiting. This factor, in contrast to relative advantage and compatibility, is negatively related to attitude. Thus, the more complex a technology, the less likely it will be adopted. This concept is quite similar to PEOU that Davis proposes in TAM. Like any technology, mobile recruitment requires certain skills and knowledge. Complexity can refer either to devices' characteristics (such as smaller screens) or to the technical skills necessary for their use.

Compatibility. In order to be adopted, the technology must be compatible with the company's values. Research by Parry and Wilson (2009) indicates that the compatibility of online recruitment with a company's values and culture is an important factor influencing the adoption of Internet in the recruitment process, and it is somehow related to the employer brand that the company wants to communicate. Compatibility refers not only to company values but also to previous experiences or exposure to related products. So, for example, if a certain company had already implemented a mobile technology, it would be more likely to have a positive attitude toward the adoption of mobile recruitment. The compatibility factor presented by Rogers (1995) is also linked to the direct and immediate need for the function that the innovation will perform, if adopted.

3.6.2 Normative beliefs decomposition: candidates and competitors.

In the decomposition of those beliefs, Taylor and Todd (1995) identify three referent groups that can be relevant in an organizational setting: peers, superiors and subordinates. In a study by Parry and Wilson (2009), the two influential groups of interest were a company's competitors and potential candidates. In an industry where both organizations and workers tend to be online, a company is more likely to use online recruitment (Parry, Wilson 2009). This can be valid for mobile recruitment as well. If most of a particular company's competitors have already decided to implement mobile technologies in their recruitment, probably there will be normative institutional pressure on that company that will lead to mimetic actions (DiMaggio, Powell 1983). In the same way, potential candidates can also influence the company. HR departments, and companies in general, should treat their potential employees like customers. This is especially true in today's world, in which the "war for talents" has

become very difficult (Heskett, Sasser et al. 2010). The degree to which clients can influence an organization in adopting a certain technology is well known, especially if those customers have a wide cluster of choices and/or they account for large per centage of the company's sales (Teo, Wei et al. 2003). Thus, if a company's targeted candidates look for jobs on their smartphone or are generally very active mobile users, we can expect that there will be probably be pressure on that company to make jobs vacancies and application processes available on smartphones. Thus, in decomposing normative beliefs, the literature suggests to refer to two main groups of influencers: competitors and potential employees.

3.6.3 Control Beliefs Decomposition: Self-efficacy and Facilitating Conditions.

Within facilitating conditions, certain resource factors may influence the adoption of mobile recruitment. These are financial resources, such as organizational budgets, and the time needed to implement mobile technologies (Weekes 2014). To express technology compatibilities issues, I adapt the factors used in the general theory of organizational adoption of IT (Riemenschneider, Harrison et al. 2003). For the purposes of this research, "technology among customers/clients" and "technology knowledge and skills of customers/clients" can be modified into "technology among job seekers" and "technology knowledge and skills of job seekers". As already mentioned, potential employees can be considered as customers of the HR department. For job seekers, the only technology needed is a smart mobile device. Therefore, the adoption of mobile recruiting will likely depend on whether members of the targeted group of job seekers possess a smartphone or a tablet.

The other factor utilized from the general theory of organizational adoption of IT is "technology within the firm". Mobile recruiting is conducted exclusively in HR departments, and the only necessary technology are the smart mobile devices. Consequently, this factor can be narrowed to "availability of smartphones or tablets within the HR department". Besides owning the devices, recruiters should also be able and confident to use them with the purpose of recruiting candidates. In DTPB this is reflected in the "self-efficacy" variable. The items reflecting this variable were adapted from papers exploring the adoption of mobile technologies in conducting banking transactions (Gu, Lee et al. 2009).

4. Hypotheses

Based on model proposed by the decomposed theory of planned behaviour, the following hypotheses have been derived to determine which factors might influence the adoption of mobile recruitment (MR):

H1: The greater the intention to adopt MR, the more likely that MR will be adopted.

H2: The greater the intention to adopt MR, the greater the intensity/frequency of actual usage of this instrument.

H3: The greater the intention to adopt MR, the more recent the usage of this instrument.

H4: The greater the attitude toward MR, the greater the intention to adopt MR solutions.

H5: The greater the external pressure to adopt MR, the greater the intention to adopt MR solutions.

H6: The higher the perceived level of control regarding the adoption of MR, the greater the intention to adopt MR solutions.

H7: The greater the perceived relative advantage of using MR, the greater the likelihood that MR solutions will be adopted.

H8: The lower the perceived complexity of implementing and using MR solutions, the greater the likelihood that MR will be adopted.

H9: The greater the perceived compatibility of MR solutions with a company's values, existing practices and targeted candidates, the greater the likelihood that MR will be adopted.

H10: The more pressure from competitors concerning adopting MR, the greater the likelihood that this technology will be adopted.

H11: The higher the pressure from job seekers concerning adopting MR, the more likely this technology will be adopted.

H12: The higher the level of self-efficacy regarding adopting MR solutions, the more likely that MR solutions will be adopted.

H13: The higher the level of facilitating conditions regarding the adoption of MR solutions, the more likely that MR solutions will be adopted.

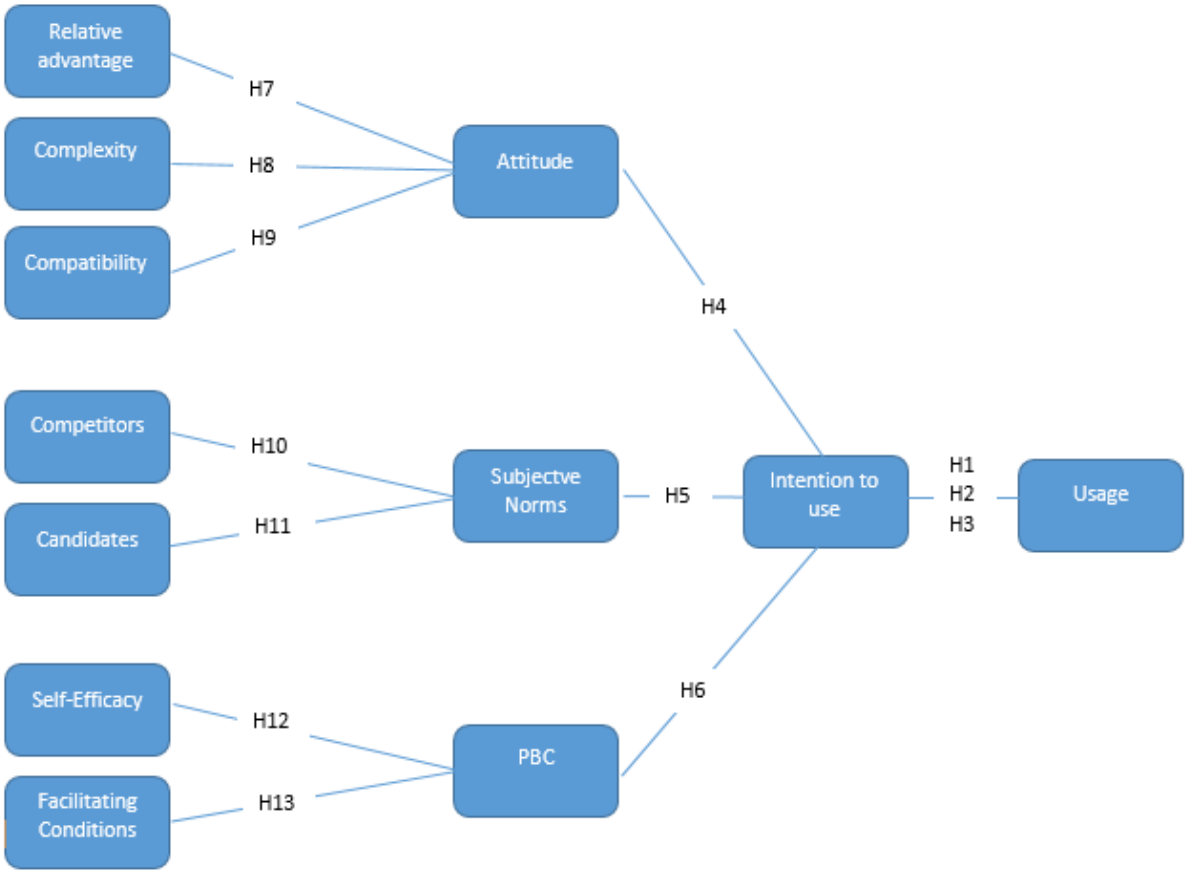

Fig. 4.1 Hypothesis

5. Methodology

Methodology is crucial in the development of a thesis, because it outlines how the research will be undertaken and how knowledge will be extracted and derived (Saunders, Lewis et al. 2009). Decisions regarding research philosophy must be made in alignment with the assumptions regarding how the world is viewed. These steps must be undertaken to construct a proper research design in line with the scope of the thesis. This is crucial, as it not only allows researchers to steer the thesis but also to validate and defend choices regarding the methods utilized to answer research questions. This section has been organized following the structure of the research "onion" (fig. 5.1).

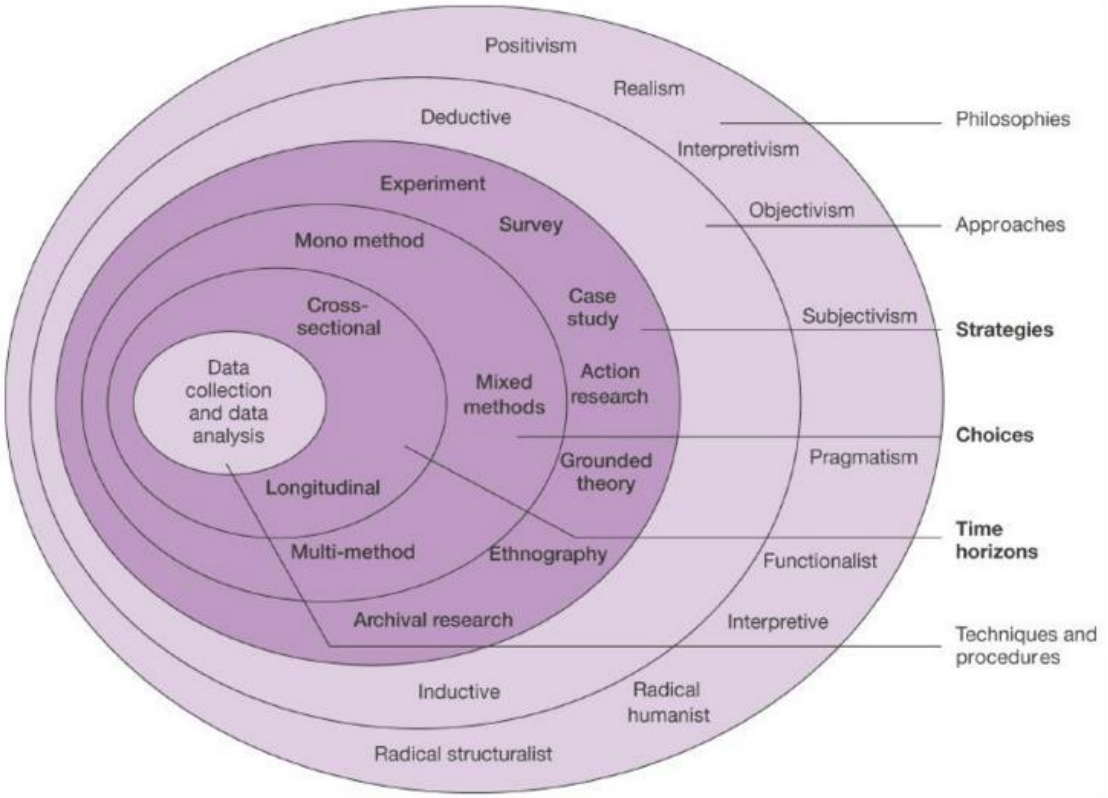

Fig. 5.1 Research Onion

5.1 Research philosophy

The outer layer of the "onion" offers the choice among positivism, realism, interpretivism and pragmatism. Positivist research deals with an "observable social reality and the end product of such researchecan be law-like generalizations" similar to the one of scientists (Saunders, Lewis et al. 2009). Realism is quite similar to positivism, since it takes a scientific approach and claims that reality is what our senses show to us (Saunders, Lewis et al. 2009). In contrast to realism and positivism, interpretivism criticizes the scientific interpretation of the world and integrates human interest into study. Interpretivists affirm that the world is too complex to be generalized by definite laws. Rather, they believe that access to reality is socially constructed by the actors involved in it (Myers 2013, Saunders, Lewis et al. 2009).

This particular study utilizes a positivist approach. While the adoption of mobile recruitment is an unexplored field, especially from recruiters' point of view, the factors that influence

adoption can be generalized from previous research. The reasons for the adoption of mobile recruitment in the recruitment process can be different from other methods, such as online recruitment. However, they are attributable to the same general factors identified in studies of previous technologies, factors such as behavioural, normative and control beliefs. The generalization is also valid across different social and organizational entities, as results valid for a specific entity can be generalized to others with similar characteristics.

Another reason that this research utilizes a positivist philosophy is the generalization over time. Subjects and factors involved in the evaluation of such technology for an adoption decision can be considered as stable over a relatively short time period. The degree of influence exerted by certain factors can change slightly, but the factors responsible for the adoption are assumed to be the same.

The positivist approach guiding this research is also consistent with choices made in previous studies in the IS field. This holds true, even though the dichotomy between positivism and interpretivism has been at the centre of a long and on-going debate. However, in IS studies, more than 75 per cent of research has followed a positivism approach, making it the dominant school of thought. Of the remaining research, 17 per cent took an interpretivist approach, while only 5 per cent utilized the critical research approach (Mingers 2001, Wu 2011). Other studies chose positivism for its objectivity, generalization and separation of the researcher from the observed object. (Kamel 2010). The choice of a positivist philosophy will determine the nature of reality (ontology), as well as what constitutes acceptable knowledge (epistemology) from the researcher's point of view.

5.2 Ontology

Ontology is concerned with the nature of social entities. Two orientations, objectivism and constructionism, distinguish themselves based on how the researcher considers the role of social actors within social phenomena. Constructionist theory claims that social phenomena are created from the perceptions of social actors and their consequent actions (Saunders, Lewis et al. 2009). In this approach, reality is socially constructed. In other words, it is formed by the subjective beliefs of each actor composing it, and it is constantly revised by their social interactions. In contrast to this approach to reality, objectivism claims that reality is

independent of the social actors who participate it in. Rather than being subjective, reality is objective (Saunders, Lewis et al. 2009). Saunders (2009) states that objectivism well represents the formal structure of an organization in which employees must report to a higher-grade manager about their actions. This can correctly portray the process of adopting an innovation in an organization in which senior managers make decisions about which technologies to implement. Furthermore, objective ontology is widely adopted when positivist philosophy is followed. For these reasons, the objectivist approach is applied in this research.

5.3 Epistemology

Epistemology deals with questions of what constitutes acceptable knowledge within a discipline (Bryman, Bell 2011). In the context of positivist philosophy, a more scientific and objective epistemological approach is usually undertaken. Bryan and Bell (2011) list five key concepts related to such an approach:

1. Only phenomena, and hence knowledge confirmed by senses, can constitute knowledge;
2. The theory leads to hypotheses that can be totally or partially accepted or refused, and this will lead to a further development of the theory;
3. Knowledge is gained by the collection of facts that provide the basis for laws;
4. Research is conducted in an objective way; and
5. Research relies on scientific statements rather than normative statements.

This research follows a methodology that fits well with positivism. Hypotheses regarding which factors can influence the adoption of mobile recruitment technologies are developed and then tested with quantitative data.

5.4 Axiology

Axiology is the branch of philosophy that studies judgements about the researcher‘s values or cultural biases. Conducting research without the influence of one’s own values can be almost impossible. In fact, our values influence topic selection or the choice of one philosophy over another. That said, my intention in this thesis is to be as objective as I can in order to produce results that can be meaningful, both academically and in the business world. The goal is that

the research's findings can provide useful implications and guidelines for understanding mobile recruitment.

5.5 Research approach

Inductive research and deductive research represent the two main approaches for inquiry. The main difference between the two approaches lies in the treatment of theory. Deductive research usually postulates hypotheses based on what is known from previous literature and theories. Then, after data has been gathered, these hypotheses are confirmed or rejected. In contrast, the inductive approach "reverses the process found in deductive approach", so that theories follow data. As stated before, the adoption of mobile recruitment is an unexplored field. However, factors influencing the adoption of new technologies have already been widely investigated and validated, making the deductive approach a good fit. Thus, this study takes the past literature as a starting point. From there, it deducts hypotheses about factors that can influence the adoption of mobile recruitment solutions.

Furthermore, the deductive approach is often consistent with the ontological and epistemological considerations adopted for this thesis: the deductive approach is often referred to as the scientific approach to research, in which the explanation of the phenomenon is anticipated by theories which are then tested by the collection and the analysis of data (Saunders, Lewis et al. 2009).

5.6 Purpose of the research

The purposes of researches are often classified in three main groups:

- Exploratory, when very little is known about the topic and new insights are sought;
- Descriptive, when there is a clear understanding of the phenomenon and the researcher want to accurately describe it; and
- Explanatory, when studies want to establish a causal relationship between variables.

It is still unknown why companies have been slow to adopt mobile apps in their recruitment process, and the factors that may play a crucial role in this phenomenon remain unidentified as well. Due to the limited research that has previously been conducted and the newness of the topic, this thesis can be considered exploratory in nature. Its goal is to better understand

the above-mentioned issues (Saunders, Lewis et al. 2009, Bryman, Bell 2011). In addition, exploratory studies are most commonly used for further defining company issues, areas for potential growth and alternative courses of action. For these reasons, an exploratory research purpose also seems appropriate also for meeting this study's business goal of helping implementators, managers and mobile app developers within recruitment to understand factors that they can leverage to accelerate the diffusion of these technologies.

5.7 Research strategy

Research strategies can follow one of three main orientations: quantitative, qualitative or a mixture of the two. This thesis adopts mixed methods procedures. Mixed methods procedures involve both qualitative and quantitative methods, analysing both forms of data to address the research question. The use of the mixed approach seems to provide a better understanding of a research problem than would a stand-alone approach (Creswell 2014). Creswell (2014) identifies basic mixed methods designs:

1. Convergent Parallel Mixed Method
2. Explanatory Sequential Mixed Method
3. Exploratory Sequential Mixed Method

This study utilizes the Exploratory Sequential Mixed Method. This research design first calls for the collection and analysis of qualitative data. Then, these findings are used in the quantitative phase. In this method, the qualitative research can facilitate the quantitative research by providing hypotheses or by aiding measurements (Bryman, Bell 2011). In this study, the semi-structured interviews have the scope to help design the self-completion survey: statements are taken directly from the interviews and inserted into the questionnaire. When completing the questionnaire, decision-making recruiters express their degree of agreement with these statements. The figure 5.2 visualizes how the process is structured.

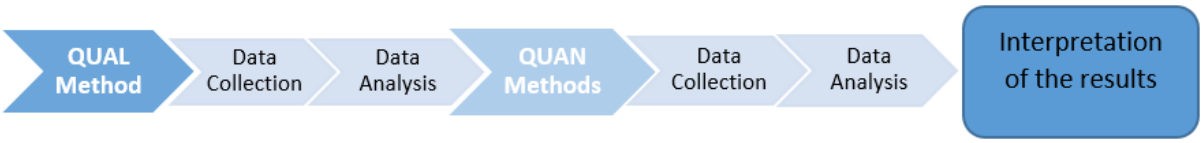

Fig. 5.2 Research Strategy

5.7.1 Qualitative research: Semi-structured interview

Qualitative research usually highlights words rather than quantification in data collection and analysis. Qualitative research is often used to understand a certain problem in a more in-depth manner rather than to explain and generalize (Bryman, Bell 2011). Researchers can choose among different qualitative approaches, such as ethnography and participant observation, interviews, focus groups, the examination of language and the examination of documentary sources (Bryman, Bell 2011). Three semi-structured interviews have been conducted to provide a deeper understanding of the factors that can influence the adoption of mobile technologies for recruitment. Knowledge gained from these interviews was further used to facilitate the development of a questionnaire. This strategy has been used by Parry and Wilson (2009), who conducted a research study with an approach and a topic both quite similar to this study.

The factors potentially influencing the adoption of mobile recruitment were derived from previous literature. This included articles not only about mobile recruiting technologies but also about other types of mobile technologies, like mobile banking and mobile commerce. The review of previous studies can have an important role in exploratory studies, as it can help the researcher during the initial steps of the study in a poorly known field (Saunders, Lewis et al. 2009). The three interviewees that took part in this study supported the researcher in two primary ways: (1) by providing factors that were not mentioned in previous research, and (2) by unconsciously formulating statements that would later be included in the survey.

Literature on how to write an interview protocol and how to conduct an interview was followed as preparation (National Center for Postsecondary Improvement 2003, Corbin, Strauss 2014). An introduction and a closing script were prepared for the interviews. These scripts explained my research, the scope of my investigation and my motivation. In addition, I ensured the interviewees regarding the confidentiality of the investigation. In order to make the interviewees feel more relaxed and more comfortable, the first question concerned their professional background. This initial question also allowed me to learn how they had reached their present positions. After this introduction, the proper interview started. The list of interview questions was structured on two levels, one general and one specific. The interviews

began with a very broad question about the participant's experience with mobile recruitment and about what he or she thought about this new trend in recruitment. If a particular topic considered relevant to the research was not covered spontaneously by the interviewee, then the interviewer further explored the issue by asking more specific questions. The sequence of the questions was developed by following the structure set out by the theoretical framework. Therefore, questions first addressed interviewees' attitudes toward mobile recruiting technologies. These were followed by enquiries regarding the possible presence of external pressures influencing their adoption, and, finally, by questions on possible factors that can speed up, slow down or impede companies' adoption of mobile technologies. However, this type of interview has a flexible format in which the interviewee has a great deal of leeway in how to reply, and this slightly affected the guideline that the interviewer had developed. In other words, while the interview framework was well structured, during the interviews themselves the emphasis was on how the interviewees framed and understood the issues. The ultimate focus was on what the interviewee perceived as important in explaining and understanding events, patterns and forms of behaviour (Bryman, Bell 2011).

5.7.1.1 Interview subjects

While the three interview subjects had quite different backgrounds and roles within their companies, all of them were strongly involved in recruitment. They took an active role in all phases of employee sourcing, from the selection of recruitment methods through pre-screening activities. These interviewees were involved in the recruitment process for low- to mid-level employees. As was explicitly stated during the interviews, sourcing methods for high-level employees are very different from those that are generally utilized, and companies often rely on external agencies or head-hunters specialized in recruiting high-level employees.

It was not possible to schedule additional interviews with executive recruiters of large corporations due to companies' restrictive disclosure policies regarding internal organizational activities. This is challenge was an additional reason for choosing the mixed research method; executives prefer to answer to anonymous questionnaires rather than participate in in-depth interviews.

The first semi-structured interview was with Roberto Zucca. He was an HR specialist with former experience at Unicredit Spa, one of the largest Italian banks, and at Japan Tobacco International. At both companies, he was responsible for recommending innovative recruiting solutions to the executive recruiters. Hence, he was the perfect person to interview to gain insights regarding the process of adoption of innovation in general and of mobile recruitment solutions in particular. The interview with Mr. Zucca, as well as with the other two participants, supported the survey's development. The three interviewees helped to phrase and structure statements in the questionnaire in the best possible manner.

The second interview was with Francesca Cancian, CEO of Talent's Angel, which is a company that supports the recruitment process of both small-medium enterprises (SMEs) and large enterprises. Unlike Mr. Zucca, Mrs. Cancian has spent most of her professional life with companies using traditional recruitment methods. Therefore, her interview was a great opportunity to gain knowledge on the barriers that recruiters perceive in the adoption and use of mobile recruitment technologies. At the same time, her interview provided an excellent opportunity to test the jargon used in the survey, so that I could be as clear as possible regarding what I was investigating.

The third and last interview was held with Mauro Maltagliati, Country Manager Italy of Cornerjob, which is a job-matching platform app based that enables recruiters to post jobs, chat and hire people directly from smart mobile devices. Cornerjob has partnered with several companies in Italy to help them reach out to mobile candidates. This interview was very useful to explore the advantages, barriers, external pressures and other factors that companies have found in a mobile job app like Cornerjob.

5.7.1.2 Procedures

The first interview was conducted on Skype, from a private apartment to Mr. Zucca's apartment. I was the interviewer, while a colleague took notes for me. The entire interview was recorded via a computer's integrated recorder. The setting of the interview was quiet, and no distractions were present. At a certain point, the interviewee started eating some snacks, from which I inferred that he felt comfortable. After introductions, the interview began with the first question in the interview guide. Mr. Zucca seemed to have a pretty solid

knowledge of the topic and provided information valuable to the research. Communication between the interviewer and the interviewee went well, except for a connection problem during the talk.

The second interview was also conducted on Skype, from an apartment to Mrs. Cancian's office. As in the first interview, I was the interviewer, while a colleague took notes. Again, the entire interview was recorded on a computer's integrated recorder. The setting of the interview was quiet, and no distractions were present. In contrast to Mr. Zucca, Mrs. Cancian had a limited knowledge of mobile recruiting, so it took more time to properly explain the main topic of the interview, along with the insights I hoped to obtain from the talk.

The third and last interview took place at Mr. Maltagliati's office, and it was recorded on my smartphone. We were alone in the office, so there were no distractions, apart a phone call and someone knocking at the door. Mr. Maltagliati gave detailed answers and provided a great deal of valuable information about how recruiters and companies are moving toward mobile recruitment.

5.7.2 Quantitative research: Self-completion questionnaire.

Quantitative research normally highlights quantification in data collection and analysis, with the objective of explaining the reasons for a phenomenon (Bryman, Bell 2011). Furthermore:

- It usually follows a deductive approach, with testing of existent theories;
- It is normally based on norms and practises of the natural scientific model, especially of positivism; and
- It incorporates an external and objective view of reality.

Researchers can choose among different quantitative approaches, such as structured interviews, self-completion questionnaires, structured observations, content analysis, secondary analysis and official statistics (Bryman, Bell 2011). To investigate which factors can influence organizations' adoption of mobile recruiting, a self-completion questionnaire was used. Such questionnaires are defined as "self-completion", because respondents answer the questions by themselves. It is probably the most common way to collect data in research because of its advantages compared with other collection methods. These benefits include

the ability to overcome geographic barriers, a low cost and the efficient use of time. Self-completion questionnaires also avoid interviewer effects. These can influence interviewees' responses, either because interviewees are aware they are being observed (Hawthorn effect) or because the interviewer drives answers toward specific and preferred outcomes (Rosenthal effect) (Blumberg, Cooper et al. 2008).

The questionnaire was structured in three parts. The first section provided a definition of mobile recruiting to ensure that the survey's topic and its delimitations were clear to respondents. This definition came from the literature review found in section 2, and it was translated into Italian. The second section posed questions regarding respondents' demographic characteristics and general information about the companies at which they worked. The questionnaire did not ask for company names, in order to avoid the "policy disclosure" problem mentioned before. The third section was further divided into three parts, which reflected the three main factors influencing the intention to adopt: attitude, subjective norms and perceived behaviour control (PBC). The constructs measured in the questionnaire are shown in Table 5.1 , along with the authors from whose work they were derived.

Variable	Item	Description	References
Intention	INT1	We are planning to use mobile recruitment (MR) in the future	(Jin, Chai et al. 2012; Shih, Fang 2004)
	INT2	We intend to use smartphone or tablet to recruit candidates	
	INT3	We intend to use MR tool frequently	
Attitude	ATT1	Using MR would be a good idea	(Jin, Chai et al. 2012; Shih, Fang 2004)
	ATT2	Using MR would be a wise idea	
	ATT3	I like the idea of using MR	
Subjective norms	SN1	Our organization needs to use MR to move with the times	(Parry, Wilson 2009)
	SN2	Those parties who are important to us would support our use of MR	(Jin, Chai et al. 2012; Shih, Fang 2004)
	SN3	Those parties whose opinions we value would support our use of MR	
Perceived Behaviour Control	PBC1	I would be able to use MR	(Shih, Fang 2004)
	PBC2	Our company would have resources, knowledge and abilities to use MR	(Jin, Chai et al. 2012)
	PBC3	Using MR tools would be under our control	
Relative Advantage	RADV1	The possibility to be connected everywhere at any time improve the efficiency of recruitment process	(Niklas, Böhm et al. 2012, Böhm 2013)

	RADV2	The use of mobile technologies makes the recruitment process faster	(Parry, Wilson 2009)
	RADV3	Chat and push notification facilitate the communication between recruiter and candidate	(Thomson 2014)
	RADV4	The use of mobile technologies allows to cut downtime of recruitment process	(Böhm 2013)
	RADV5	The possibility to target the job posts and the candidate depending on the location improve the efficacy of recruitment process	(Parry, Wilson 2009)
	RADV6	The use of mobile solutions allows to reach a wider pool of candidate	(Parry, Wilson 2009; Böhm, Niklas 2012, Niklas, Böhm et al. 2012)
	RADV7	The implementation of mobile solutions allows to strengthen the employer branding of the company	(Böhm, Niklas 2012)
Complexity	CPX1	The limited size of the screen and of the keyboard makes difficult the use of smartphones in recruitment	(Niklas, Böhm et al. 2012; San Martín, López-Catalán et al. 2012)
	CPX2	The MR solutions are easy to use	(Jin, Chai et al. 2012)
	CPX3	Learning how to use mobile technologies in the recruitment is simple and intuitive	(Jin, Chai et al. 2012)
	CPX4	It is complex to integrate mobile technologies in the existent processes for recruiting personnel	(Parry, Wilson 2009)
Compatibility	COMP1	The use of mobile solutions in the recruitment process is compatible with values and believes of the company where I work	(Jin, Chai et al. 2012)
	COMP2	The company where I work is receptive toward technologies like MR	(Parry, Wilson 2009)
	COMP3	MR is compatible with the innovation process undertaken by the company	(Jin, Chai et al. 2012)
	COMP4	MR is compatible with the existent organizational practices in the recruitment area	(Parry, Wilson 2009)
Candidates	CAND1	The candidates interested in joining the company where I work expect that the initial phases of recruitment process are optimized for mobile devices	(Jin, Chai et al. 2012)
	CAND2	Job seekers' opinion affects our decision about recruiting methods	(Jin, Chai et al. 2012)
	CAND3	Our target candidate expect our company to be innovative in the recruitment practices	(Parry, Wilson 2009)
Competitors	CPTT1	Most of our competitors use mobile solutions in the initial phase of recruitment process	(Jin, Chai et al. 2012; Parry, Wilson 2009)

	CPTT2	In the past the company where I worked adopted the same recruitment methods of the competitor	(Jin, Chai et al. 2012)
	CPTT3	In our industry, the use of MR is helpful in allowing a company to be competitive in the attraction of candidate	(Jin, Chai et al. 2012)
Facilitating Conditions	FACC1	Mobile apps that can improve recruitment process do not exist	(Niklas, Böhm et al. 2012)
	FACC2	The budget requested for implementing mobile solutions for recruitment can represent a barrier to the adoption of such technology	(Jin, Chai et al. 2012; Shih, Fang 2004)
	FACC3	The time requested for implementing mobile solutions for recruitment can represent a barrier to the adoption of such technology	(Shih, Fang 2004)
	FACC4	Most of our potential candidate owns a smartphone	(Riemenschneider, Harrison et al. 2003; Weekes 2014)
	FACC5	Most of the recruiters in the company where I work owns a smartphone	(Riemenschneider, Harrison et al. 2003; Weekes 2014)
Self-Efficacy	SELF1	Recruiters of the company where I work do not find difficulties in using MR	(Gu, Lee et al. 2009)
	SELF2	In the company where I work, recruiters have confidence to use mobile recruitment	(Gu, Lee et al. 2009)
	SELF3	In the company where I work, recruiters do not need any assistance for using mobile recruitment	(Gu, Lee et al. 2009)

Table 5.1 Items

All the questions of this section were structured in the same way: respondents were asked to rate their level of agreement with statements about mobile recruitments on a 7-point Likert-scale. These statements were deduced from: (1) previous research in the field of mobile and information technologies that adopted the same theoretical framework as this research, and (2) the three semi-structured interviews.

5.7.2.1 Access to subjects and sampling method.

The self-completion questionnaire was sent to subjects selected among my connections on LinkedIn. The selection of appropriate subjects was made by filtering the list of contacts and opting to select only recruiters or HR managers with decision-making power or managers that

it was assumed they could influence the decision-maker concerning the adoption of the technology. Thus, the sampling method can be defined as a convenience sample, as it selected those who were readily available to the researcher due to a high degree of accessibility (Bryman, Bell 2011). Indeed, LinkedIn was an easy channel on which to spread the survey and to reach out to the correct target.

A snowball sampling method was considered. This could have generated more research subjects by emailing the questionnaire to existing subjects and giving them the opportunity to further spread it. However, this method was discarded due to the lack of control over the potential respondents.

5.8 Time horizon

The last layer of the research "onion" concerns the time horizon, or, the timeframe during which the research was conducted. Researchers can choose between longitudinal and cross-sectional time horizons. Due time constraints, most master's theses are cross-sectional studies, which means that they explore a particular phenomenon at a particular time. This research took a "snapshot" of the phenomenon of mobile recruiting in early 2016. This "snapshot" covered the time between when the surveys were sent out and when the answers were collected.

6. Data analysis

Data analysis generally involves examining, transforming and modelling data with the goal of highlighting useful information that addresses a study's initial proposition. Data analysis has multiple facets, and it encompasses approaches that help describe facts, detect patterns, develop explanations and test hypotheses. The goal of this study's data analysis is to explore which factors can influence the adoption of mobile solutions among HR managers in their recruitment processes. In order to accomplish this goal this chapter presents and discusses the data that was collected and that will be used to test the hypotheses previously provided. The sequential research method guides this chapter's structure. Since the results of the interviews were preparatory for the development of the survey, they are analysed first. The data collected through the survey is then presented and discussed to give a satisfying overview and to test the study's hypotheses.

6.1 Qualitative data analysis

This section reveals findings from the in-depth interviews. These findings have been categorized into the three main constructs of DTPB: attitude, subjective norms and perceived behaviour control.

6.1.1 Behavioural beliefs

Following the decomposition suggested by Taylor and Tod, the results linked to attitudes toward the adoption of mobile recruitment technologies have been divided into three categories. These are: relative advantage, compatibility and complexity.

6.1.1.1 Relative advantages

Findings suggest that there are recurrent beliefs among the participants. However, these beliefs manifest themselves in different manners. The most-quoted advantage that interviewees perceived was that mobile technologies could certainly improve the pace of the recruitment process. Mobile technologies make the process **faster** and cut the time needed for recruiting candidates, and they do so in a manner that is linked to other characteristics and benefits provided by smartphone and tablets. More specifically, the possibility to be **"always on",** regardless of location and time, was mentioned as a valuable advantage of mobile technologies in recruitment, with similar implications for the recruitment process, according to the interviewees:

"mobile apps specifically designed for supporting the recruitment process allow (the recruiter) to be always on and to interact with the candidates at any moment […] this leads to expansion and improvement in the time committed to the selection (of the candidates) as well as the time of the candidate's research".

The possibility to be "always on" gives recruiters a direct advantage in that they can screen, select and hire candidates directly from their smartphones. However, the possibility to be "always on" also brings an indirect advantage for recruiters:

"candidates are always reachable on their smartphone, this substantially improves the communication with them".

Interviewees mentioned an **improvement in the communication** between recruiter and candidate as an important element in the speeding up of the recruitment process. Chat functions, the specific characteristics of mobile interactions and the "always on" mode make communication, and in turn the recruitment process, faster:

"recruiters see a great potential in the rapidity of communication of mobile technologies, […] job posts on mobile job boards are literally like tweets, so around 140 characters, and they are combined with a photo. […] The possibility to chat directly with the candidates is another advantage which makes the tool even faster".

Furthermore another interviewee stated:

"I frequently use mobile for quick notices to candidates or for setting up the interviews, because I see that people are always on through chat functions".

The key features of mobile devices make mobile apps "an **effective recruitment tool**". According to one of the interviewees, GPS is one of these tools:

"***geolocation*** *really helps recruiters to target and choose people who are close to them, this is very important when they are looking for non-professional. […] For a company offering a not so well-paid job, finding someone close to the workplace can increase the chance that the candidate will accept the job as well as being an effective way to retain that employee".*

All of these advantages and improvements brought about by mobile technologies have already been mentioned in existing literature both inside and outside of the recruitment sphere. However, the interviews also unearthed an interesting finding that has never been cited in the literature as a valuable advantage of mobile technologies: the use of **data analytics** as an effective way to select a candidate.

"candidates (on mobile apps) present themselves in a different way, not by a piece of paper, but with series of data that can be interesting from an analytic point of view".

The first part of this paper states that recruiting should also be viewed as a marketing practice. And, the degree to which companies rely on data for their marketing campaigns is very well

known. Thus, according to the interviewee, an extensive use of data can actually be further implemented into recruitment practices.

Among marketing practices applied to recruitment, employer branding certainly plays a role. Employer branding encompasses all of the actions that can be undertaken to reinforce a company's image and to become the employer of choice. Improvements in **employer branding** seem to be another advantage of using mobile recruitment apps:

"Candidates are much more curious to get involved because the dynamics (of mobile recruiting apps) seem more like the ones that people normally do in their everyday life, such as interacting with the Internet, the apps, the social networks, the candidate's profile [...] It is more interesting, it gives you a different way of looking to the job world, totally new".

Furthermore, mobile apps for recruitments were described as:

"engaging for the candidate to the app, and especially for the candidate toward the company which interacts through the app. It's interesting, and we have to admit that people now want to work in companies that get in line with the digital evolution".

6.1.1.2 Complexity

The complexity of mobile apps for recruitment was analysed on two different levels by the interviewees: (1) the complexity of using the apps, and (2) the complexity of implementing mobile technologies in the recruitment process. Regarding the former, an interviewee claimed that, "**mobile devices' limits**, such as the small screen and keyboard, makes me prefer using desktop computer, I need a bigger screen to work more comfortably".

This statement is in line with findings in the existing literature. Hardware characteristics can result in negative attitude regarding smartphone and tablets.

Regarding the complexity of implementing mobile solutions, an interviewee stated that:

"some companies have to face a **high level of bureaucracy**, an overdose of process, therefore is clearly easier to be stacked to more traditional recruitment methods, rather than mobile".

6.1.1.3 Compatibility

Similarly to complexity, factors related to compatibility have also been evaluated at two different levels. These are: (1) compatibility in terms of the **target group and image**, and (2) the compatibility of mobile technologies with **existing recruiting practices and methods**.

"If you are looking for an executive manager, mobile is not ok. This is due to the specs of mobile apps that are not suited for that kind of job. It's the kind of communication that is not right […] if you would like to talk to a candidate for a lower level position, it's more likely you'll find them on mobile rather than by email".

Compatibility with technological solutions that have already been implemented in the recruitment process can also influence the adoption of mobile recruitment solutions:

"For example, multiposting, which is a tool that has been implemented at lot in the past years, has not been developed thinking about apps, it has nothing to do with apps"

6.1.2 Normative beliefs

Normative beliefs are linked to referent individuals or groups that can influence a recruiter's decision – and in turn, a company's decision – of whether to adopt mobile recruiting. The interviews highlighted findings similar to those in the existing literature, in which researchers found that competitors and job seekers are the most influential groups in the adoption decision (Parry, Wilson 2009).

"Companies compare themselves a lot to their **competitors** when it comes to recruitment methods, especially big corporations. There is a sort of imitation to those companies which actually use this recruitment method. [...] There is a social pressure from the surrounding environment, it seems that you are not in step with times, which I think it is also right. The pressure is coming more from the competitors rather than from job seekers […] and you are out if you do not use mobile recruitment or social networks in your recruitment process".

Furthermore, another interviewee stated:

"The technological development is necessary […], it is necessary to use devices that everyone around you is using, like the use of mobile devices by **job seekers** in their job searches".

6.1.3 Control beliefs

Following the theoretical framework of DTPB, control beliefs have been decomposed into two constructs: (1) **facilitating conditions**, or factors in the environment that may impede the use of mobile recruitment, and (2) **self-efficacy**, which refers to a recruiter's confidence in his or her ability to adopt the technology.

6.1.3.1 Facilitating conditions

In the interviews, **budget and time constraints** were mentioned as "restricting conditions". This was especially the case regarding the time required to implement technologies in the existent recruitment practices.

"Companies, especially the bigger ones, are like elephants when they have to implement such technologies".

One interviewee, however, focused more on the availability of smartphones and on fast mobile connections among users. This interviewee highlighted the **digital divide** as an influential factor outside of recruiters' control.

"there are the technological problems like the diffusion of smartphones, broadband and 3G connections. […] In Italy the penetration rate of smartphones is over 50 per cent, however with some disparities, in Molise is probably around 15-20 per cent, while in Lombardia around 75 per cent".

6.1.3.2 Self-efficacy

The **skills and knowledge** necessary to use mobile devices in the recruitment process can reflect the degree of confidence that one has regarding the use of mobile recruitment. Interviewees did not believe that the skills and knowledge required for mobile recruitment could be a barrier to its adoption, stating that, "the obstacle can occur whether users are not able to use smartphones, but actually it is the best method".

6.2 Quantitative data analysis

Data analysis generally involves examining, transforming and modelling data with the goal of highlighting useful information that addresses a study's initial proposition. Data analysis has multiple facets, and it encompasses approaches that help describe facts, detect patterns,

develop explanations and test hypotheses. The goal of this study's data analysis is to explore which factors can influence the adoption of mobile solutions among HR managers in their recruitment processes. This will be accomplished by testing hypotheses deducted from previous literature about the adoption of technologies.

To that end, 145 recruiters involved in the selection of recruitment methods were tested through a self-completion questionnaire. This questionnaire asked them to express their level of agreement with statements regarding mobile recruitment.

6.2.1 Demographic profile

The questionnaire's demographic questions were quite limited. The managers were asked to specify only their gender, age group and the size of the company at which they worked.

Of the 145 respondents, only 35 were male, representing 24 per cent of the total. There were 110 female respondents, making up around 76 per cent of the sampled population. These findings cannot be compared to previous literature, since no published studies have circulated questionnaires among Italian HR managers.

"Age" has been categorized into three groups reflecting the classification made by eMarketer reports. These reports often segment the population into Generation Y (19-33), Generation X (34-45) and Baby Boomers (46+). An ample majority of the sample, around 76 per cent (110 individuals), were millennials, or, managers younger than 34 years old. Seventeen per cent were between 34 and 45 years old (25 individuals), and only 7 per cent (10 individuals) fell into the Baby Boomer category.

The third characteristic by which managers were classified was company size. The partition was between small-medium enterprises (SMEs) and larger enterprises. According to the European Commission, SMEs are companies that employ less than 250 people, while big companies top that number. In this sample, most of the recruiters worked for a SME. Recruiters at SMES made up 61 per cent (89 individuals) of the total sample, while 39 per cent (56 individuals) were employed at larger enterprises.

6.2.2 Reliability and validity

Reliability "refers to the extent to which data collection techniques or analysis procedures will yield consistent findings" (Saunders, Lewis et al. 2009). Reliable research can be replicated on other occasions by other observers and will produce the same results. This means that reliability tests are able to spot measurement items or questions that could produce misleading findings.

Even though it has been criticized as a measure for testing reliability, Cronbach's alpha is one of the most widespread tests for evaluating the consistency of the items included in such an analysis (Peterson 2013). The debate regarding Cronbach's alpha has focused on the cut-off criteria for tested items. Since the minimum accepted value of alpha can be set at a lower level for research in its early stages (Nunnally 1967), I kept variables with a Cronbach's alpha greater than 0.6. This is consistent with other early-stage research on technology adoption (Tan, Teo 2000). Most of the variables were reliable according to Cronbach's alpha. However, two of them – Complexity and Facilitating Conditions – fell far below the 0.6, while Competitor had a value of 0.596. Therefore, I analysed the factor loadings of these three variables.

The factor loadings also raised doubts about these three variables. Items Complexity1 and Complexity4 were dropped, since their loadings were less than 0.2, and the remaining factor loadings were above 0.9. Factor loading for item Competitor2 was also lower compared to the rest of the items in the model. Nonetheless, Hair et al. (1998) stated that for a sample size of 150 cases, the cut-off threshold could be set at 0.45, while Stevens (1992) referred to a minimum loading of 0.4, independent of the sample size. Since the loading was reasonably above this limit (0.595), the item was kept in the model.

Facilitator1 had the lowest loading in the entire model, -0.069, so it was dropped. After removing this item and running another round of factor analysis, Facilitator4 and Facilitator5 were also removed. The remaining items had a factor loadings higher than 0.85. Appendix B contains a table displaying the loadings of the remaining factors, as well as a graphical representation of the model with the corresponding factor loadings.

After the reduction of the factors, all variables were reliable according to Cronbach's alpha. The variable reflecting competitor's constructs was considered reliable. Its alpha was quite close to the threshold, and there was no reason to drop one of the three items from the model.

Composite reliability is believed to be a much less biased estimation of reliability as compared to Cronbach's alpha (Peterson 2013). Similar to Cronbach's alpha, composite reliability is based on the squared sum of the factor loadings divided by the error variance of each indicator. Factors are considered reliable when they present a composite reliability higher than 0.7 (Fornell, Larcker 1981). The composite reliability was calculated both before and after the reduction of the factors mentioned. This test also showed that Facilitator and Complexity were only reliable after the reduction, since when all items were kept, their composite reliabilities were 0.55 and 0.64, respectively.

Bryman and Bell (2011) define validity as whether an indicator (or a set of indicators) that is meant to gauge a concept really measures that concept. This means that validity tests try to certify that the research variables represent the truth. This study tested three types of validity: face, content and construct validities.

Face validity refers to the study's ability to develop measures that reflect the content of the concept under analysis (Bryman 2011). The measures included in this research reflect previous studies about either recruitment or other technology adoption processes. In fact, most of the items in the questionnaire were adapted from literature applying adoption theories. In addition, during the three semi-structured interviews, through their experience and knowledge in the field, the recruiters helped the researcher to improve the measures' face validity.

Content validity occurs when the whole phenomenon under investigation is adequately represented by the instrument used in the research (Neuman 2005). Here, substantial efforts were taken to cover key aspects of mobile recruitment, despite the lack of comparable research in this field. Content validity deals also with the research sample. The sample should be an adequate size, and the instrument (in this case, the questionnaire), should target the right group of individuals This makes it possible to reduce biases associated with research measurements to acceptable levels (Neuman 2005). This aspect of content validity has also

been addressed, since the questionnaire was only sent to recruiters involved in the decision-making process regarding the adoption of recruitment methods.

Construct validity refers to whether an instrument measures what it is supposed to represent in the model being tested. They are two types of validities: discriminant and convergent (Neuman, 2005). Convergent validity tests whether two variables that should be related are actually related. This type of construct validity goes along with discriminant validity, which, in contrast, tests whether two variables that should not be related are actually not related (Neuman, 2005).

In order to test discriminant validity of the research model, the average variance extracted (AVE) should be calculated for each indicator (Fornell, Larcker 1981). The discriminant validity holds if the square root of AVE of each construct is greater than its correlation with other constructs (Chin 1998). As can be seen in Appendix A, all the constructs show a good degree of discriminant validity. Analysis of the AVE for each construct was undertaken to test convergent validity as well. An AVE higher than 0.5 is considered to be a good indicator of convergent validity (Fornell, Larcker 1981), and as is shown in the table below, all of the constructs exceeded that threshold. Convergent validity and discriminant validity can also be tested by looking at factor loadings (Wixom, Watson 2001; Wynne 1998). Convergent validity holds when the items display high loadings on their constructs, while discriminant validity holds when the items do not present major cross-loadings on other constructs (Watson, Weber et al. 1995). The factor loadings matrix in Appendix A shows that both types of validity are present, since all items load higher than 0.75 on their constructs, and there are not major cross-loadings, except between the Attitude and Intention constructs (Gefen, Detmar 2005).

The Table 6.1 summarizes the values for Cronbach's alpha, composite reliability and AVE for each variable.

Factor	Average Variance Extracted (AVE) [> 0.50]	Composite Reliability (Fornell) [> 0.70]	Cronbach's Alpha (Nunnaly) [> 0.60]
Relative Advantage	0.5888	0.9089	0.8829
Attitude	0.8985	0.9637	0.9434
Candidate	0.6796	0.8641	0.7643
Compatibility	0.7738	0.9318	0.9024
Competitors	0.5472	0.7766	0.5952
Complexity	0.8357	0.9105	0.8035
Facilitating Conditions	0.7955	0.886	0.7463
Intention	0.9123	0.9689	0.9519
Perceived Behaviour Control	0.6577	0.851	0.7399
Self-efficacy	0.61	0.8242	0.6839
Subjective Norms	0.6625	0.8496	0.7181

Table 6.1 Reliability and Validity

7. Results

The data collected in the questionnaire is first presented, followed by a subsequent analysis indicating whether the proposed hypotheses can be supported or rejected. Twelve of the thirteen hypotheses were tested by running multilinear regressions using the statistic software, SPSS. Since actual usage was expressed by a dichotomous variable, a binary logistic analysis was conducted to test the relationship between intention and actual usage.

7.1 Usage

All studies following Ajzen's theory or its extensions have viewed intentions as an important influence in the adoption of technologies or services. In this research, intention has been analysed as predictor of various dimensions of usage: actual, frequency and recency. The findings reported below show that intention significantly predicted all three dimensions of usage. This result is consistent with two theories proposed by Ajzen – the theory of reasoned action and the theory of planned behaviour (TPB). Most of the literature reviewed in this

study, the DTPB included, has not measured the actual link between intention and behaviour, instead taking this relationship as a given. Pedersen (2005), in his exploratory study of mobile commerce, is one of the few who actually tested the link between intention to use and actual use of mobile services. He found the relationship to be significant between these variables.

7.1.1 Actual Usage

The hypothesis regarding the affect of intention on actual usage is one of the three hypotheses formulated to test the relationship between intentions toward mobile recruitment and its usage by recruiters. In contrast to the rest of the tests conducted in this analysis, a binary logistic regression was run, because the dependent variable Usership1 is dichotomous. Indeed, it has been tested whether the intention to use mobile recruitment leads to an actual usage. Similar to linear regression models, logistic regression predicts the presence of an outcome based on the values of certain predictors (Knapp, 1998). The model shows that intention is a significant predictor of actual usage, and it has an accuracy of 64.1 per cent. This means that, if we predict the actual usage of mobile recruitment based on the intention to use it, we have a 64.1 per cent probability of being correct. The odds ratio is 0.646, while the coefficient is -0.412. However, this relationship is related to non-adoption, so intention is negatively correlated with non-adoption, which means that it positively influences adoption. The coefficients reflect the variation in the dependent log odds according to one-unit variations in the independent variable. So, a one-unit increase in the intention to adopt increases the logit of the estimated log-odds of adopting mobile recruitment by 0.437 units. And, the odd ratio deals with the change of the odds when there is a variation in the independent variable. In this case, for a one-unit increase in the intention to use, we can expect to see about a 65 per cent increase in the odds of using mobile recruitment.

H1: The greater the intention to adopt MR, the more likely that MR will be adopted. SUPPORTED

7.1.2 Frequency of usage

While the first hypothesis was concerned with the actual use of mobile recruitment, this hypothesis is related to the frequency of usage. In the questionnaire, recruiters were asked to express how often they use mobile recruitment on scale ranging from “never” to “daily”. An

ANOVA was conducted to determine if the intention toward the adoption could influence the frequency with which mobile recruiting is utilized. The test showed a significant result at a significance level of α=0.01 (1%) (R2=0.165), p<0,00001. This means that an increase in the intention to adopt leads to an increase in the frequency of actual usage. Based on R^2, intention explains 16.5 per cent of variability in the frequency of usage.

H2: The greater the intention to adopt MR, the greater the intensity/frequency of actual usage of this instrument. ACCEPTED

7.1.3 Recency of usage

The last construct reflecting usage regards the recency of use. Recruiters were asked to indicate, on a 1-to-10 scale, when they had last used mobile recruitment apps. "Never" had a value of 1, and "yesterday" had a value of 10. The relationship between intention and recency of use was also examined via an ANOVA, in exactly the same manner as was hypothesis 1b. The test showed a significant result at a significance level of α=0.01 (1%) (R^2=0.132), p<0,00001. This means that intention toward the usage is positively related to the recency of usage. Looking at R^2, intention explains 13.2 per cent of variability in the recency of usage.

H3: The greater the intention to adopt MR, the more recent the usage of this instrument. ACCEPTED

7.2 Predictors of intention

The predictors of intention toward the adoption of mobile recruitment are: attitude, subjective norms and perceived behaviour control (PBC). To evaluate whether these constructs actually influence the intention to adopt, a multi-regression analysis was conducted. Based on the ANOVA test, we can affirm that the model works and that it is significant (F=154,982, p <0,00001). Attitude, subjective norms and PBC help us to understand 76 per cent of total variability in intention toward the adoption of mobile recruitment. Attitude is the best predictor of intention, and it alone explains 75 per cent of total variability. In addition, both attitude and subjective norms are significant. Attitude displayed a p-value lower than 0.00001 and a β of 0.816, while subjective norms had a p-value lower than 0.01 and a β of 0.153.

These findings are consistent with past literature regarding the application of mobile technologies in commerce and banking. Pedersen (2005), in his exploratory study of mobile commerce adoption, found both subjective norms and attitude to be good predictors of intention toward the use of that service. Similar to this study, an analysis of mobile banking adoption in the Middle East also identified attitude as the best predictor of intention. However, that study did not find subjective norms to be related to intention. The influence of subjective norms in the prediction of usage has been always at the centre of a debate, as was mentioned in the literature review. In fact, normative beliefs were excluded from Davis's TAM. However, this study's results have confirmed the researcher's expectations and are also consistent with findings from Parry and Wilson (2009) regarding online recruitment. In their study, subjective norms had a significant impact on the adoption of corporate career and commercial job-board websites. Research about Findings from the study that applied DTPB to evaluate the organizational adoption of new development tools (Jin, Chai et al. 2012), were also consistent with this study's results. In that study, both subjective norms and attitude had a significant relationship with intention.

In contrast to previous studies, the relationship between PBC and intention is not significant, since the p-value was higher than 0.3 (β=-0.043). An explanation for this finding can be derived directly from Taylor and Todd's work when they first introduced the DTPB. There, PBC was significant to intention when TPB was applied, but it failed to achieve significance in the DTPB model. Taylor and Todd expected this relationship to be tenuous, because the analysed product was relatively expensive and technical. Therefore, PBC might vary, depending on factors such as income and technical aptitude. This could be valid for mobile recruitment as well, since the development of mobile apps can be technical and costly – to a much higher degree than the actual use of such apps. In addition, Taylor and Todd (1995b) cited Ajzen and Madden (1986) to explain the lack of significance in the relationship between PBC and intention. In their study, respondents presented, on average, high levels of PBC (1.66 on a scale from -3 to +3), and there was a relatively low variability (σ= 1.16). According to Ajzen and Madden (1986), under such conditions PBC is less likely to be related to intention.

The descriptive statistics are also noteworthy here. On average, recruiters displayed a high level of control (5.32 on a 7-point scale), with a low standard deviation (1.268).

H4: The greater the attitude toward MR, the greater the intention to adopt MR solutions. ACCEPTED

H5: The greater the external pressure to adopt MR, the greater the intention to adopt MR solutions. ACCEPTED

H6: The higher the perceived level of control regarding the adoption of MR, the greater the intention to adopt MR solutions. REJECTED

7.3 Predictors of attitude

As has been presented in this paper's theoretical section, factors that could affect attitudes toward a technology were expected to include: (1) the perceived relative advantage of using it; (2) its compatibility with the company's values, culture and past experiences; and (3) the complexity of using it. These relationships have also been tested with a multiple regression. Relative advantage ($p<0.00001$, $\beta=0.555$) and compatibility ($p<0.01$, $\beta=0.199$) were both significant, while complexity was not found to be so. The model was significant ($p<0.00001$, $F=40.780$, $R^2=0.465$), explaining 46.5 per cent of variability in attitude toward adoption.

In all research in which behavioural theories have been applied, a technology's perceived relative advantage has been designated as an important factor driving adoption. This has been the case regardless of the field, whether it be mobile banking, mobile commerce, organizational adoption or online recruitment. For example, the possibility of conducting banking transactions more quickly and in a more efficient manner was found to increase the likelihood that a bank would adopt mobile apps (Gu, Lee et al. 2009). Similarly, the opportunity to save time, and to improve efficiency and effectiveness, could be a meaningful predictor of the adoption of mobile commerce (Pedersen 2005).

Clearly, a technology's usefulness is not the only factor that affects an individual's attitude toward a certain behaviour (in this case, the adoption of mobile recruitment). The difficulty of accomplishing a certain action can affect the actual performance of that action. This does not only sound intuitive but it has also been proven by many of the already mentioned studies; in fact, Taylor and Todd were the first to do so. However, while complexity was expected to be negatively related to adoption, this is not what this study's findings indicate. The lack of a

significant relationship could be explained by the fact that complexity begins to play a more critical role when people have actually started using – or at least testing – the instrument to adopt (Moore and Benbasat 1991). Since mobile recruitment is at an early stage of adoption, users may still not have a clear understanding of the actual complexity of this technology. Another possible explanation – which is the opposite of the first – is mobile apps' intuitiveness. Developers are constantly aiming to create apps that express the highest level of user-friendliness in order to make them intuitive and accessible to everyone. Recruiters might not be knowledgeable regarding the potential complexity of apps for recruitment, and this might mitigate this factor's effect on attitude formation.

H7: The greater the perceived relative advantage of using MR, the greater the likelihood that MR solutions will be adopted. SUPPORTED

H8: The lower the perceived complexity of implementing and using MR solutions, the greater the likelihood that MR will be adopted. REJECTED

H9: The greater the perceived compatibility of MR solutions with a company's values, existing practices and target candidates, the greater the likelihood that MR will be adopted. SUPPORTED

7.4 Predictors of subjective norms

Competitors and candidates were the two factors that were expected to influence individuals' subjective norms regarding the adoption of mobile recruitment. The model was found to correctly predict the relationship between the independent variables and the dependent variable. ANOVA revealed that both factors were significantly related to subjective norms. Competitors had a p-value of less than 0.001 and a β=0.297, while candidate a p-value of less than 0.00001 and a β=0.373. These findings are consistent with research that has analysed organizational adoption of online recruitment (Parry, Wilson 2009) and financial EDI (FEDI) (Teo, Wei et al. 2003). In a sector where potential candidates and competitors are mostly online, there might be external pressure on companies in that sector to adopt online recruitment methods. If that were the case, the company might, in turn, be more likely to do

so. Similar results were found in the case of financial EDI, where customers and competitors can have a strong influence on the organizational adoption of such instruments.

H10: The more pressure from competitors concerning adopting MR, the greater the likelihood that this technology will be adopted. SUPPORTED

H11: The higher the pressure from job seekers concerning adopting MR, the more likely this technology will be adopted. SUPPORTED

7.5 Predictors of Perceived Behaviour Control (PBC)

Self-efficacy and facilitating conditions were also tested in relationship to respondents' PBC. ANOVA revealed that, of the two variables, only self-efficacy was significant at the 1 per cent significance level ($p=0.01$, $\beta=0.245$), while facilitating conditions had an influence on PBC at a 5 per cent significance level ($p=0.024$, $\beta=0.192$). The model ($p<0.0001$, $F=10.805$) had the capacity to predict around 13 per cent of PBC's variance. Unfortunately, not much research has been conducted on mobile technologies or organizational adoption that could serve as a comparison to these findings. Pedersen's study (2005) on mobile commerce is one of the few pieces of research that has decomposed control beliefs in self-efficacy and facilitating conditions. He found both factors equally predictive of perceived control over adoption. However, regarding the adoption of instant messaging in organizations, facilitating conditions has shown more predictive power as compared to self-efficacy. Employees consequently emphasized additional hardware/software support rather than improving capabilities related to instant messaging usage. This is in contrast with the findings of this research. In the adoption of mobile recruitment, recruiters identified the needed capabilities for using the technology as requiring more support than the technology itself. This could be due to perceptions that smartphones and mobile apps already receive adequate support and that they have reached a "state-of-the-art" level as concerns mobile recruitment.

H12: The higher the level of self-efficacy regarding adopting MR solutions, the more likely that MR solutions will be adopted. SUPPORTED

H13: The higher the level of facilitating conditions regarding the adoption of MR solutions, the more likely that MR solutions will be adopted. SUPPORTED

Factor	Hypothesis	Variable	R^2	Beta	P value	Status
Usage	H1	Intention	0.641*	0.437	0.0001	Supported
Frequency	H2		0.165	0.406	0.0000	Supported
Recency	H3		0.132	0.363	0.0000	Supported
Intention	H4	Attitude	0.767	0.816	0.0000	Supported
	H5	Subjective Norms		0.153	0.002	Supported
	H6	PBC		-0.043	0.362	Rejected
Attitude	H7	Relative advantage	0.465	0.555	0.0000	Supported
	H8	Complexity		-0.083	0.2113	Rejected
	H9	Compatibility		0.199	0.0013	Supported
Subjective Norms	H10	Candidates	0.341	0.373	0.0000	Supported
	H11	Competitors		0.297	0.0002	Supported
PBC	H12	Self-efficacy	0.132	0.245	0.004	Supported
	H13	Facilitating Cond.		0.192	0.024	Supported**

*Refers to the overall predicted percentage correct

** Significant with alpha=5%

Table 7.1 Hypothesis

8. Discussion

This chapter is based on the previously presented empirical findings. It elaborates on these findings to provide a deeper understanding of study results. The factors introduced in the theoretical framework, along with their relationships with mobile recruitment adoption, are extensively discussed, with the goal of addressing the following research question:

What are the factors influencing the adoption of mobile recruitment among organizations?

8.1 Antecedents of adoption

The relationship between intention and actual behaviour is one of the cornerstones of the three behavioural theories (TRA, TPB and TAM) (Ajzen, Fishbein 1977, Ajzen, Fishbein 1980, Ajzen 1985, Ajzen 1991, Davis Jr 1986, Davis 1989, Davis, Bagozzi et al. 1989) and it has been widely investigated also by other researchers analysing the adoption of a technology (Shih, Fang 2004, Pedersen 2005, Wiedemann, Strebel 2011). This study confirms that intention is an important predictor of the actual usage of a technology, in this case mobile recruitment apps. In order to make adopt the mobile recruitment apps first intention to use them should be enhanced

Regarding the formation of the intention to adopt mobile recruitment, the study revealed that attitudinal and normative factors play a significant role. In fact, a recruiter's attitude toward these apps has a stronger predictive power as compared to that recruiter's subjective norms. This might mean that, if a recruiter believes that mobile recruitment is not a good method for his or her recruitment process, he or she might decide against its adoption, even in the presence of external influencers exerting pressure to do otherwise. This finding is in line with researches analysing the adoption of other types of mobile services such as mobile banking and mobile commerce. This might suggest that people are often following more their personal believes about a technology rather than believes of their external influencers.

Counter to what DTPB suggests, perceived behavioural control (PBC) over the technology does not seem to affect the intention to adopt mobile recruitment. Previous literature provided two possible explanations for this unexpected outcome. A more practical explanation suggests that relationship between PCB and intention can be tenuous when the technology is perceived as very expensive and very technical to use. The other explanation takes insights from statistical values, such as means and standard deviations. Items for PBC presented relatively high average and low variability, and under these circumstances, PBC is less likely to be related to intention. The theory of planned behaviour, an extension of TRA, offers an additional justification for these study findings. TRA was extended through the insertion of PBC, so as to include those behaviours not totally under the user's control. It might be that recruiters

believe that mobile recruitment is so accessible that they perceive it as completely under their control.

8.1.1 Attitudinal factors

Attitude and subjective norms directly influence the intention to adopt mobile recruitment, while certain other factors have an indirect influence. This study looked at the three attributes of innovation proposed by Roger (1995) that are included in the decomposition of behavioural beliefs: relative advantage, complexity and compatibility (Taylor, Todd 1995a). Of these, relative advantage and compatibility were significant contributors to the formation of one's attitude toward mobile recruitment. Possibilities to improve the company's employer branding, speed the recruitment process, and dilate the recruitment process without time and location constraints were all found to be significantly and positively related to the attitude toward mobile recruitment. Mobile recruitment could be a trend, as some individuals within HR industry affirmed. However, without tangible advantages it would have not been adopted – nor would it be in the future.

To be adopted, mobile recruitment should also be consistent with a company's values, culture and past experiences. The analysis of the questionnaire has proved how a company that previously has not been proactive in the adoption of new technology for recruitment or that generally it does not place innovation at the centre of its mission would be less likely to use such new methods. In the same way also interviewees strongly highlighted the importance of a company culture's compatibility in the adoption of mobile recruitment. Organizations with young HR managers and that are more inclined to innovate seem to be more likely to adopt mobile recruitment tools.

While the advantages of mobile recruitment and its compatibility with a particular company had a positive relationship with adoption, the complexity of using such technology was negatively related to adoption, as was expected. However, the model indicated that this relationship was not significant. This result is probably due to the fact that mobile recruitment is not particularly widespread. Since complexity plays a more critical role when the trial period is already underway, recruiters might not be accurately estimating the difficulty of using this technology and its influence in the adoption process.

Literature providing possible explanations is quite limited, and for that reason, I have hazarded another possible justification for this uncommon relationship. The number of mobile apps installed on smartphones, along with the amount of time that individuals spend using them, has surged incredibly in the past few years. Similarly, individuals' experience in app usage has also increased. This, in addition constant research aimed at improving mobile apps ease of use, might have rendered complexity a factor that no longer has influence in this arena.

8.1.2 Normative factors

Pressure from a company's external environment can also influence the adoption of mobile recruitment methods. More specifically, companies consider their competitors and their targeted candidates when choosing whether to adopt mobile recruitment. Mimetic processes can push companies in the same sector toward the adoption of mobile recruitment. Recruiters at a certain organization may decide to use mobile recruitment to avoid losing their competitive advantage in attracting candidates. As was explained by one of the interviewees, the organizations "Best Place to Work" and "Top Employers" publish annual rankings and surveys that indirectly activate imitating processes from one company to another.

Pressure to adopt mobile recruitment can come from candidates as well. If most potential employees are mobile, companies tend to adopt mobile recruitment methods to avoid excluding those job seekers who are looking for vacancies on their smartphones. A link can also be seen here with companies' employer branding. As mentioned above, employer branding has been identified as a potential advantage of this recruitment method. To receive recognition as an employer of choice, companies might feel pressure from their target candidates to use mobile recruitment.

8.1.3 Control factors

While control over the use of mobile recruitment was not found to influence actual usage, the antecedents of PBC can both be considered good predictors of the constructs. Clearly, when a company decides whether a new instrument should be used, certain constraints (e.g. time and budget) can have a strong influence. This is especially true, because research may indicate that mobile recruitment is not seen as a stand-alone method but rather as a complement to

existent methods. Therefore, recruiters might face temporal or budgetary constraints that could prevent them from using mobile recruitment, even if they would like to do so.

9. Managerial implications

One of the main purposes of this research is to provide useful information to all actors involved in activities related to mobile recruitment. Companies and entrepreneurs who have entered or who will enter the business of mobile recruitment could benefit greatly from reviewing this study. While recent years have seen the launch of many mobile apps supporting recruitment activities, the diffusion of these solutions is still very limited. Thus, the identification of specific factors that lead to the adoption and use of this technology could result in a range of suggestions on how to further develop and market mobile solutions for supporting recruitment processes. This study has identified many such factors, and a solid understanding of them could provide companies and entrepreneurs with strategic insights into how to design and implement mobile recruitment services to yield higher organizational acceptance. External companies that provide mobile solutions for bringing the recruitment process to smartphones and tablets will from here onwards be referred to as “mobile recruitment providers” (MRPs).

Research findings have shown that it is key to enhance recruiters’ attitudes toward mobile recruitment to increase the likelihood that this technology will actually be utilized. This study found that perceived relative advantages and compatibility influence the formation of a positive attitude toward mobile recruitment. This positive relationship between the technology’s usefulness and recruiters’ attitudes toward the technology has some essential implications for MRPs. MRPs should emphasize all of the valuable benefits that the use of mobile technologies can bring to the recruitment process. These include: improvements in employer branding; increases in the efficiency of the recruitment process; the possibility to recruit everywhere and at any time, without location and time constraints; increases in hiring speeds; and improved communication with candidates. Mobile recruitment offers all of these benefits to recruiters who are looking for an alternative to traditional recruitment methods – or who simply would like an additional option for attracting and hiring potential candidates. MRPs should provide facts backing their claims regarding the positive gains to be made via

mobile recruitment. Such facts could include, for example, data showing actual improvements in employer branding or data illustrating the higher levels of efficiency and efficacy provided by this method. Certain recruiters may not be aware of such benefits of mobile recruitment. Or, they might not believe that this method could be useful in actual practice. An effective way to reduce these biases toward mobile recruitment could be to offer a free trial for a limited period. Such a trial could practically demonstrate the benefits that mobile recruitment can bring to the HR department.

In addition, the positive relationship between compatibility and attitude also has important implications for MRPs. First of all, MRPs could identify companies that, due to their culture, values and past experience, are *par excellence* compatible with mobile recruitment. This strategy could help MRPs select companies more inclined to adopt mobile recruitment, thus maximizing the success rate regarding sales of the service. The most attractive clients would be companies with young management teams, innovation-oriented cultures and previous proactive behaviour regarding the adoption of new methods for recruiting personnel. That said, MRPs should also emphasize how mobile recruitment might be a good match for clients with values that initially do not seem completely compatible. MRPs should communicate that mobile recruitment is a solution for all companies, rather than just some of them.

Along with internal perceptions about mobile recruitment in terms of advantages and company compatibility, the significant relationship between subjective norms and intention toward use also has useful managerial implications for MRPs. MRPs should identify and target those subjects that can influence their companies' decisions to adopt. They should then attempt to enhance these subjects' positive attitudes toward mobile recruitment apps.

The study selected two groups of subjects that companies cannot ignore when making decisions about recruitment methods: job seekers and competitors. Potential adopters of mobile recruitment must keep their target job seekers in mind throughout the duration of the adoption evaluation process. Job seekers, together with recruiters, are the two actors that actually use mobile recruitment apps. Thus, it is critical to know what candidates think about mobile recruitment. Surveys have indicated that the number of people looking for jobs on

their smartphones is increasing. However, not all the job seekers have favourable views of this method.

Job seekers can be segmented in many different ways, such as by age or by the type of job for which they are searching. Surveys have shown that the amount of time one spends on mobile is linked to age and that younger people spend more time on their mobiles compared to older people. The age of the targeted candidates can be a first variable to evaluate when a company is deciding whether to offer mobile recruitment channels. In addition, the level of the job could be taken into consideration. During the semi-structured interviews, one of the recruiters expressly said that mobile recruitment is more appropriate for less experienced candidates looking for entry-level jobs than for executives looking for more senior roles. There are many other ways to segment potential candidates, and these can vary based on the type of company and the sector in which it works. Companies targeting candidates who are looking for jobs on their mobile devices, or companies that are likely to do so in the future, could be very attractive clients for MRPs. This is because such companies they feel higher external pressures to adopt. The number of companies that feel external pressures to adopt mobile recruitment will increase as the number of job seekers using mobile recruitment grows. Consequently, MRPs should promote the diffusion of mobile recruitment also among job seekers.

In addition to job seekers, companies considering the adoption of mobile recruitment solutions should also consider their competitors. MRPS could thus identify attractive clients by looking for companies whose competitors already use mobile recruitment solutions. Similarly, it is important that MRPs to communicate to potential clients that their competitors are already using mobile recruitment services. For example, MRPs should publish the names of the companies that use their mobile recruitment services. This information should appear both on MRPs' websites and in their general marketing materials.

While perceived control over mobile recruitment was not found to be related to the intention to adopt, MRPs would probably benefit from taking into account the predictors of perceived control: self-efficacy and facilitating conditions. Educating recruiters on the use mobile recruitment could be a suitable way to enhance users' self-efficacy. Such education could take the form of tutorials or service support, and the ultimate goal would be to increase adoption

of the service. At the same time, recruiters should also consider potential adopters' budgetary situations, along with the time it would take the potential adopters to use mobile recruitment. An initial trial period would a good way to bypass budget constraints, at least at the beginning. Later on, MRPs should offer various plans with different services priced to fit companies' varying budgets.

10. Limitations and further research

This study has several limitations that should be addressed in future research to produce even more accurate and valuable results. The main limitations are linked to the sample of respondents, the research timeframe and the research model's structural limits.

First, due to the time constraints typically associated with academic theses, it was not possible to conduct a longitudinal study. In a market where new technologies, improvements and changes happen almost daily, the results of a cross-sectional study may not be perfectly generalizable. A longitudinal study could better investigate all stages related to the launch of mobile recruitment services (pre-launch, promotional and post-launch). The factors influencing the usage of mobile recruitment apps may change as soon as the service is launched and adopted by the companies. The actual opinions regarding the service may be different compared to the perceptions that recruiters have before starting using it. Some factors may become more relevant than others and at the same time factors not significant before (e.g. PBC) may become crucial. In the same way a longitudinal study could give as a picture on how influencing factors may evolve over time following the diffusion, or the no diffusion, of such recruitment method.

Secondly, the effect of demographic variables, such as age and gender, on the adoption of mobile recruitment was not explored due to the limited number of gathered responses. For the same reasons, it was not possible to make comparisons among factors influencing adopters and factors influencing non-adopters. Furthermore, variables linked to company size, type and sector were not analysed in the study. To address these limitations, future research could analyse how the factors influencing the adoption of mobile recruitment vary according to recruiters' demographical characteristics and companies' characteristics. Research could also compare adopters and non-adopters.

Thirdly, it is important to remember that DTPB is designed to evaluate factors affecting the individual's behaviours, and not organizations' behaviours. This study assumed that the person who responded to the questionnaire was the one actually responsible for selecting recruitment methods. While it would be useful to look at the opinions of all actors involved in the decision-making process, this study's research design is in line with past literature (Kumar) suggesting that the use of appropriate informants can be a valid method to collect data about an organization. Researchers interested in the adoption of mobile recruitment could try to develop a model that incorporates factors not included in this study but that influence the adoption of mobile recruitment among organizations.

Finally, limitations exist regarding the study's sample. The sampling procedure was not randomized; rather, the researcher selected the respondents. This method had the advantage that it allowed the correct people to be selected for the survey, since only employers involved in the selection of new recruitment methods were targeted. However, the sample does not precisely reflect the actual population. All of the recruiters who answered to the survey were employed by companies based in Milan, and so the results cannot be generalized to the rest of Italy or for other countries.

11. Conclusion

The study's purpose was to identify factors that could influence the adoption of mobile recruitment among organizations. The decomposed theory of planned behaviour (DTPB) was utilized as the research model. This model is specifically designed to evaluate the individual rather than the organizational adoption of technology. To that end, key informants – recruiters involved in the selection of recruitment methods – were chosen to accurately represent the will of their entire organizations.

The paper first reviewed past literature in the field of recruitment and technology adoption, and hypotheses were then constructed, based upon factors that play a key role. Then, three semi-structured interviews were conducted with three recruiters to explore these factors. The qualitative data analysis helped firstly to gain knowledge of the status of mobile recruitment among some Italian companies and secondly to adapt items, derived from previous literature, for the self-completion. The survey was sent through LinkedIn to a group of recruiters,

identified by the researcher, who seemed to have decisional roles in the selection of recruitment methods. A total of 145 responses were gathered, and the datasets were entered first into SmartPLS to test for reliability and validity and then into SPSS to conduct multilinear regressions. The quantitative analysis provided valuable results with significant implications, especially for companies providing mobile recruitment services.

First of all, the study confirmed what certain other studies regarding technology adoption had taken for granted: intention toward the use of mobile recruitment is a good predictor of its use. Mobile recruitment usage was measured by three dimensions: actual usage, recency of use and frequency of use. All of these were found to be significantly predicted by intention. In turn, and according to DTPB, intention was expected to be affected by attitude, subjective norms and PBC. However, only attitude and subjective norms were significant, while PBC was not. Among attitudinal factors, relative advantages and compatibility supported the adoption of mobile recruitment. The third factor analysed, complexity, negatively influenced the adoption of mobile recruitment; however, this relationship was not significant. Complexity plays a more instrumental role when users have at least trialled the technology. The fact that mobile recruitment is still at an early stage in Italy might be a possible explanation for this unexpected result regarding complexity (Tan, Teo 2000).

External forces, represented by companies' targeted candidates and competitors, were also found to influence the decision to adopt mobile recruitment. This means that if job seekers expect to search for and apply for jobs directly through their mobile devices, the company would feel pushed to adopt that method. Similarly, the diffusion of mobile recruitment among competitors could pressure a company to adopt such methods, triggering mimetic action.

PBC was not a significant influencer of adoption. However, the decomposition of control beliefs into self-efficacy and facilitating conditions showed that each component was positively and significantly related to the perceived behavioural control over mobile recruitment. Thus, the availability of time and budgetary resources, together with recruiters' confidence in their abilities to use mobile recruitment, favourably influence its adoption.

The study's findings have important implications for companies providing mobile recruitment services. The information contained in this research could be extremely useful in identifying

key success factors for successfully marketing the service and increasing the rate at which recruiters adopt this technology.

However, the research is not without limitations. To begin, the model that was utilized could be seen as too general and not perfectly fit for this analysis. Secondly, the recruiters responding to the survey all worked for companies based in Milan. In addition, the manner in which they were selected was not randomized. Therefore, it is not possible to generalize the results. Finally, the study utilized a cross-sectional timeframe. However, recruiters' opinions and perceptions might change in the short term, considering the rapid evolution in the market. Future researches may have different objectives, firstly to address the limitations present in this study, secondly to further develop proper models for understanding the adoption of mobile services and finally to continue supporting the strategic decisions for the adoption of mobile recruitment services.

BIBLIOGRAPHY

AHONEN, T.T., 2015-last update, *Market share of smartphone OS of total smartphone installed base in 2013 and 2014*. Available: http://www.statista.com/statistics/385022/smartphone-worldwide-installed-base-operating-systems-share/ [10/13, 2015].

AJZEN, I. and FISHBEIN, M., 1980. Understanding attitudes and predicting social behavior.

AJZEN, I., 1991. The theory of planned behavior. *Organizational behavior and human decision processes,* **50**(2), pp. 179-211.

AJZEN, I., 1991. The theory of planned behavior. *Organizational behavior and human decision processes,* **50**(2), pp. 179-211.

AJZEN, I., 1985. *From intentions to actions: A theory of planned behavior.* Springer.

AJZEN, I., 1985. *From intentions to actions: A theory of planned behavior.* Springer.

AJZEN, I., 1985. *From intentions to actions: A theory of planned behavior.* Springer.

AJZEN, I. and FISHBEIN, M., 1977. Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological bulletin,* **84**(5), pp. 888.

AJZEN, I. and MADDEN, T.J., 1986. Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of experimental social psychology,* **22**(5), pp. 453-474.

ALFAHL, H., SANZOGNI, L. and HOUGHTON, L., 2012. Mobile commerce adoption in organizations: A literature review and future research directions. *Journal of Electronic Commerce in Organizations (JECO),* **10**(2), pp. 61-78.

ALFAHL, H., SANZOGNI, L. and HOUGHTON, L., 2012. Mobile commerce adoption in organizations: A literature review and future research directions. *Journal of Electronic Commerce in Organizations (JECO),* **10**(2), pp. 61-78.

AL-QEISI, K.I., 2009. Analyzing the use of UTAUT model in explaining an online behaviour: Internet banking adoption.

APPANNIE, 2015. *Mobile App Advertising and Monetization Trends 2013-2018: Freemium and In-App Ads Expand Their Lead.*

ARRINGTON, M., 2008-last update, iPhone App Store Has Launched (Updated). Available: http://techcrunch.com/2008/07/10/app-store-launches-upgrade-itunes-now/ [10/13, 2015].

ARTHUR, D., 2012. *Recruiting, interviewing, selecting & orienting new employees.* AMACOM Div American Mgmt Assn.

BACH, S., 2005. *Managing Human Resources: Personnel Management in Transition.* John Wiley & Sons.

BARBER, A.E., 1998. *Recruiting employees: Individual and organizational perspectives.* Sage Publications.

BARNARD, J., 2014. *Advertising Expenditure Forecasts.* Zenith Optimedia Group Limited.

BASENESE, L., 2011-last update, **This is the Biggest Tech Trend Ever… and These 10 Stats Prove It** [Homepage of http://www.wallstreetdaily.com/2011/06/20/10-reason-for-biggest-tech-trend/], [Online] [10/07, 2015].

BEYOND.COM, 2011-last update, The online job search goes mobile. Available: https://about.beyond.com/Content/Resources/files/MobileRecruitment_INFOGRAPHIC.pdf [10/19, 2015].

BLUMBERG, B., COOPER, D.R. and SCHINDLER, P.S., 2008. *Business research methods.* 2. ed. edn. London: .

BOCK, W., FIELD, D., ZWILLENBERG, P. and ROGERS, K., 2014. *The Mobile Internet Economy in Europe.* Boston Consulting Group.

BÖHM, S., 2013. Behavior and expectations of mobile job seekers: an industry study focusing on job boards, *Proceedings of the 2013 annual conference on Computers and people research* 2013, ACM, pp. 105-110.

BÖHM, S. and NIKLAS, S.J., 2012. Mobile recruiting: insights from a survey among german HR managers, *Proceedings of the 50th annual conference on Computers and People Research* 2012, ACM, pp. 117-122.

BONDAROUK, T.1., RUËL HUUB and LOOISE JAN, K.1., 2011. *Electronic HRM in theory and practice.* Bingley, U.K: .

BRANINE, M., 2008. Graduate recruitment and selection in the UK: A study of the recent changes in methods and expectations. *Career Dev Int,* **13**(6), pp. 497-513.

BROUGHTON, A., FOLEY, B., LEDERMAIER, S. and COX, A., 2013. The use of social media in the recruitment process. *Retrieved May,* **2**, pp. 2014.

BROWN, V.R. and VAUGHN, E.D., 2011. The writing on the (Facebook) wall: The use of social networking sites in hiring decisions. *Journal of Business and Psychology,* **26**(2), pp. 219-225.

BRYMAN, A. and BELL, E., 2011. *Business research methods.* 3. ed. edn. Oxford: .

CALVASINA, G.E., CALVASINA, R.V. and CALVASINA, E.J., 2014. Social Media and Human Resource Staffing: Legal, Policy and Practice Issues for Employers. *Journal of Legal, Ethical and Regulatory Issues,* **17**(2), pp. 51.

CAPPELLI, P., 2001. Making the most of online recruiting. *Harvard Business Review,* **70**, pp. 139.

CAREER BUILDER, 2013-last update, The upward mobility: the advantages and disadvantages of mobile recruitment [11/09, 2015].

CAUDILL, J.G., 2007. The growth of m-learning and the growth of mobile computing: Parallel developments. *The International Review of Research in Open and Distributed Learning,* **8**(2),.

CHEN, Z., LI, R., CHEN, X. and XU, H., 2011. A Survey Study on Consumer Perception of Mobile-Commerce Applications. *Procedia Environmental Sciences,* **11**, pp. 118-124.

CHEN, L., GILLENSON, M.L. and SHERRELL, D.L., 2002. Enticing online consumers: an extended technology acceptance perspective. *Information & Management,* **39**(8), pp. 705-719.

CHIN, W.W., 1998. Commentary: Issues and opinion on structural equation modeling.

CNN, 2014-last update, **A brief history of Netflix** [Homepage of CNN], [Online]. Available: http://edition.cnn.com/2014/07/21/showbiz/gallery/netflix-history/ [10/09, 2015].

COHEN, P., 2008-last update, **App Store downloads top 100 million, games a centerpiece**. Available: http://www.macworld.com/article/1135453/appstore.html [10/13, 2015].

COLLIER, K., 2013-last update, **This is clever recruiting on Spotify!**. Available: http://www.winningimpression.com/recruiting-on-spotify-it-got-my-attention/ [11/15, 2015].

COLLINGS, D.G. and WOOD, G., eds, 2009. *Human Resource Management: A critical approach.* First edn. 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN: Routledge.

CONSTINE, J., 2015-last update, **Spotify Makes The Shift To Mobile With 52% Of Listening Now On Phones And Tablets**. Available: http://techcrunch.com/2015/01/10/music-is-a-mobile-linchpin/ [10/07, 2015].

CONSTINE, J., 2014-last update, **Facebook In The Age Of Mobile-Only**. Available: http://techcrunch.com/2014/04/27/the-age-of-mobile-only/ [11/16, 2015].

CORBIN, J. and STRAUSS, A., 2014. *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Sage publications.

COURSARIS, C. and HASSANEIN, K., 2002. Understanding m-commerce: a consumer-centric model. *Quarterly journal of electronic commerce,* **3**, pp. 247-272.

CRESWELL, J.,W., 2014. *Research design: Qualitative, quantitative, and mixed methods approaches.* 4. ed. edn. Thousand Oaks: .

CRR, 2015-last update, *Mobile commerce spending as percentage of total e-commerce spending in selected global markets in 2015, by device*. Available: http://www.statista.com/statistics/281256/mobile-commerce-as-percentage-of-e-commerce-sales/ [10/06, 2015].

D. WIEDEMANN and J. STREBEL, 2011. Organizational Determinants of Corporate IaaS Usage, *Commerce and Enterprise Computing (CEC), 2011 IEEE 13th Conference on* 2011, pp. 191-196.

DAVIDSON, L., 2015-last update, **Digital to account for half of UK ad spend for the first time**. Available: http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/11418000/Digital-to-account-for-half-of-UK-ad-spend-for-the-first-time.html [10/13, 2015].

DAVIS JR, F.D., 1986. A technology acceptance model for empirically testing new end-user information systems: Theory and results.

DAVIS, F.D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly,* , pp. 319-340.

DAVIS, F.D., BAGOZZI, R.P. and WARSHAW, P.R., 1989. User acceptance of computer technology: a comparison of two theoretical models. *Management science,* **35**(8), pp. 982-1003.

DEERING, S., 2015-last update, How Do Fortune 500 Companies Use Twitter for Recruitment?. Available: http://theundercoverrecruiter.com/fortune-500-companies-twitter-recuitment-study/ [09/16, 2015].

DEERING, S., 2015-last update, **What Are the Global Recruitment Trends in 2015?**. Available: http://theundercoverrecruiter.com/global-recruitment-trends/ [09/23, 2015].

DETERDING, S., SICART, M., NACKE, L., O'HARA, K. and DIXON, D., 2011. Gamification: Using Game Design Elements in Non-Gaming Contexts.

DIMAGGIO, P.J. and POWELL, W.W., 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review,* , pp. 147-160.

DREDGE, S., 2014-last update, **SoundCloud revamps iPhone app as majority listen on mobile devices**. Available: http://www.theguardian.com/technology/2014/jun/26/soundcloud-mobile-iphone-app-streaming [11/14, 2015].

DREYER, K., 2015-last update, **Mobile Internet Usage Skyrockets in Past 4 Years to Overtake Desktop as Most Used Digital Platform**. Available: https://www.comscore.com/Insights/Blog/Mobile-Internet-Usage-Skyrockets-in-Past-4-Years-to-Overtake-Desktop-as-Most-Used-Digital-Platform [10/07, 2015].

EAGLY, A.H. and CHAIKEN, S., 1993. *The psychology of attitudes.* Harcourt Brace Jovanovich College Publishers.

EBIZMBA, 2015-last update, **Top 15 Most Popular Job Websites | October 2015**. Available: http://www.ebizmba.com/articles/job-websites [10/15, 2015].

EMARKETER, 2015-last update, *Digital buyer penetration in Western Europe from 2013 to 2018.* [Homepage of Statista], [Online]. Available: http://www.statista.com/statistics/261611/digital-buyer-penetration-in-western-europe/ [10/07, 2015].

EMARKETER, 2015-last update, Mobile to Account for More than Half of Digital Ad Spending in 2015 . Available: http://www.emarketer.com/Article/Mobile-Account-More-than-Half-of-Digital-Ad-Spending-2015/1012930 [10/13, 2015].

EMARKETER, 2015-last update, *Tablet user penetration worldwide as share of population from 2013 to 2019**
. Available: http://www.statista.com/statistics/219909/global-tablet-penetration-forecast/ [01/07, 2016].

EMARKETER, 2015-last update, Western Europe's Tablet Population Will Grow 11% This Year . Available: http://www.emarketer.com/Article/Western-Europes-Tablet-Population-Will-Grow-11-This-Year/1012809 [01/07, 2016].

EMARKETER, 2014-last update, Driven by Facebook and Google, Mobile Ad Market Soars 105% in 2013. Available: http://www.emarketer.com/Article/Driven-by-Facebook-Google-Mobile-Ad-Market-Soars-10537-2013/1010690 [13/10, 2015].

EMARKETER, 2014-last update, Mobile Gaming Revenues Won't Quit Growing. Available: http://www.emarketer.com/Article/Mobile-Gaming-Revenues-Wont-Quit-Growing/1011451 [10/12, 2015].

EMARKETER, 2014-last update, **Smartphone user penetration as percentage of total global population from 2011 to 2018*** . Available: http://www.statista.com/statistics/203734/global-smartphone-penetration-per-capita-since-2005/ [01/07, 2016].

EMARKETER, 2014-last update, *Worldwide net mobile advertising revenue share of selected online companies from 2013 to 2014*. [Homepage of Statista], [Online]. Available: http://www.statista.com/statistics/260476/worldwide-net-mobile-advertising-revenue-share-of-selected-online-companies/. [10/13, 2015].

EMARKETER, 2012-last update, *Share of monthly mobile music listeners among population of the United States from 2011 to 2017.*. Available: http://www.statista.com/statistics/265722/share-of-mobile-music-listeners-in-population-of-the-us/ [10/07, 2015].

EMARKETER, 2012-last update, US Total Media Ad Spending share by media, 2010-2016. Available: http://www.marketresearchworld.net/content/view/5106/77/ [10/13, 2015].

ENGLER, P. and TANOURY, P., 2013. Employers use of Facebook in recruiting. *The Ethical Imperative in the Context of Evolving Technologies,* , pp. 61.

FACEBOOK, 2015. *Facebook Reports Third Quarter 2015 Results.*

FEIN, R., 1998. Traditional or Electronic Tools: How Do People Get Hired?. *Journal of Career Planning & Employment,* **58**(4), pp. 40-43.

FLURRY, 2015-last update, *Distribution of time spent on apps on mobile devices in the United States in June 2015, by category*. Available: http://www.statista.com/statistics/248343/distribution-of-time-spent-ios-and-android-apps-by-category/ [10/13, 2015].

FORBRUN, C., TICHY, N.M. and DEVANNA, M.A., 1984. *Strategic Human Resource Management.* New York: Wiley.

FORNELL, C. and LARCKER, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research,* , pp. 39-50.

FORREST, C., 2015-last update, **Google Play v Apple App Store: The battle for the mobile app market**. Available: http://www.techrepublic.com/article/google-play-v-apple-app-store-the-battle-for-the-mobile-app-market/ [10/13, 2015].

FREDRICKSEN, C., 31/08/2010, 2010-last update, Mobile Content Revenues to Top $1.5 Billion [Homepage of eMarketer], [Online]. Available: http://www.emarketer.com/Article/Mobile-Content-Revenues-Top-15-Billion/1007903 [10/07, 2015].

FREITAS, A. and SCHLEMMER, E., 2013. Mobile learning: definition, uses and challenges. *Increasing Student Engagement and Retention Using Mobile Applications: Smartphones, Skype and Texting Technologies,* , pp. 47.

GAGER, S., BOWLEY, R., CRUZ, E. and BATTY, R., 2015. *2015 Global Recruiting Trends.* LinkedIn.

GALLOP, 2015-last update, **The 2015 Edition: App Store vs Google Play Store**. Available: https://blog.gallop.io/the-2015-edition-app-store-vs-google-play-store/ [10/14, 2015].

GASS, R. and DIOT, C., 2010. An experimental performance comparison of 3G and Wi-Fi, *Passive and active measurement* 2010, Springer, pp. 71-80.

GAUDIOSI, J., 2015-last update, **Mobile game revenues set to overtake console games in 2015**. Available: http://fortune.com/2015/01/15/mobile-console-game-revenues-2015/ [10/12, 2015].

GEFEN, D. and STRAUB, D., 2005. A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems,* **16**(1), pp. 5.

GIRARD, A. and FALLERY, B., 2011. e-Recruitment: from transaction-based practices to relationship-based approaches. *TV Bondarouk, HJM Ruël, & J..Looise (Eds.), Electronic HRM in Theory and Practice (Advanced Series in Management, Volume 8),* , pp. 143-158.

GLASSDOOR, 2014-last update, The state of mobile search. Available: http://www.glassdoor.com/blog/9-10-job-seekers-search-jobs-mobile-glassdoor-state-mobile-job-search-survey/ [10/19, 2015].

GREENBERG, J., 2015-last update, We're all media companies now!. Available: http://www.wired.com/2015/05/video-companies-now/ [10/09, 2015].

GSMA, 2015. *The Mobile Economy 2015.*

GU, J., LEE, S. and SUH, Y., 2009. Determinants of behavioral intention to mobile banking. *Expert Systems with Applications,* **36**(9), pp. 11605-11616.

GUPTA, R., 2014-last update, **SHOULD YOU HAVE MOBILE RECRUITING APPS?**. Available: http://www.targetrecruit.net/blog/mobile-recruiting-2/mobile-recruiting-apps/ [11/07, 2015].

HAIR, J., TATHAM, R., ANDERSON, R. and BLACK, W., 1998. *Multivariate data analysis.* 7th edn.

HAMARI, J., KOIVISTO, J. and SARSA, H., 2014. Does gamification work?--a literature review of empirical studies on gamification, *System Sciences (HICSS), 2014 47th Hawaii International Conference on* 2014, IEEE, pp. 3025-3034.

HESKETT, J.L., SASSER, W.E. and SCHLESINGER, L.A., 2010. *The Value Profit Chain: Treat Employees Like Customers and Customers Like.* Simon and Schuster.

HUHMAN, H.R., 2015-last update, **6 Recruitment Trends You Can't Ignore in 2015**. Available: http://www.entrepreneur.com/article/240951 [09/23, 2015].

HUUB RUËL, RODRIGO MAGALH?ES and CHIEMEKE, C.C., 2011. Chapter 2 Human Resource Information Systems: An Integrated Research Agenda. Emerald Group Publishing Limited, pp. 21-39.

IFBI, 2015. *IFPI Digital Music Report 2015.* IFBI.

IFBI, 2014. *IFPI Digital Music Report 2014.* IFPI.

IHS, 2015. *Global Mobile Advertising Revenue 2014 The State of Mobile Advertising Around the World.*

JACOB, S.A. and FURGERSON, S.P., 2012. Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *The Qualitative Report,* **17**(42), pp. 1-10.

JACOBS, P., 2013. Mobile recruitment (part two) Awakening the sleeping giant. *Human Resources Magazine,* **17**(6), pp. 14-15.

JACOBS, P., 2012. Mobile recruitment (part two) Awakening the sleeping giant. *Human Resources Magazine,* **17**(6), pp. 14-15.

JIN, D., CHAI, K. and TAN, K., 2012. Organizational adoption of new service development tools. *Managing Service Quality: An International Journal,* **22**(3), pp. 233-259.

JOBVITE, 2015. *Job Seeker Nation Study 2015.* JobVite.

JOBVITE, 2014. *2014 Social Recruiting Survey.* JobVite.

JONES, L., 2015-last update, SoundCloud for Recruiters. Available: http://www.barclayjones.com/blog/social-media-for-recruiters/soundcloud-for-recruiters/ [11/14, 2015].

JOOS, J.G., 2008. Social media: New frontiers in hiring and recruiting. *Employment relations today,* **35**(1), pp. 51-59.

KABIRY, N. and FORGHANI, M.H., 2013. Factors affecting Isfahanian mobile banking adoption based on the technology acceptance model.

KAKIHARA, M. and SORENSEN, C., 2002. Mobility: An extended perspective, *System Sciences, 2002. HICSS. Proceedings of the 35th Annual Hawaii International Conference on* 2002, IEEE, pp. 1756-1766.

KALIKA, M., 2000. Le management est mort, vive le e-management! .

KAMEL, S., 2010. *E-Strategies for Technological Diffusion and Adoption: National ICT Approaches for Socioeconomic Development.* Hershey, PA, USA: IGI Global.

KAY, A., 2000. Recruiters Embrace the Internet.

KIVIAT, B., 2009. How Skype Is Changing the Job Interview.

KOSINSKI, M., 2015-last update, **Mobile-Optimized Career Sites: More Important Than Ever**. Available: https://www.recruiter.com/i/mobile-optimized-career-sites-more-important-than-ever/ [11/12, 2015].

KOSOFF, M., 2015-last update, **Uber created its own smartphone game to recruit drivers**. Available: http://uk.businessinsider.com/uber-launches-uberdrive-game-2015-6?r=US&IR=T [11/16, 2015].

KUMAR, N., STERN, L.W. and ANDERSON, J.C., 1993. Conducting interorganizational research using key informants. *Academy of management journal,* **36**(6), pp. 1633-1651.

LADIMEJI, K., 18/05/2012, 2012-last update, Recruiting the Old Fashioned Way. Available: https://www.recruiter.com/i/recruiting-the-old-fashioned-way/ [09/11, 2015].

LANCE, C.E., BUTTS, M.M. and MICHELS, L.C., 2006. The sources of four commonly reported cutoff criteria what did they really say? *Organizational Research Methods,* **9**(2), pp. 202-220.

LAVER, R., 2000. Recruiting on the web.

LEGGE, K., 2005. *Human resource management, Rhetorics and realities.* Basingstoke: .

LELLA, A., 2015-last update, **Number of Mobile-Only Internet Users Now Exceeds Desktop-Only in the U.S.**. Available: https://www.comscore.com/Insights/Blog/Number-of-Mobile-Only-Internet-Users-Now-Exceeds-Desktop-Only-in-the-U.S [10/07, 2015].

LELLA, A., 2014-last update, **Half of Millennial Netflix Viewers Stream Video on Mobile**. Available: http://www.comscore.com/ita/Insights/Data-Mine/Half-of-Millennial-Netflix-Viewers-Stream-Video-on-Mobile [10/09, 2015].

LENGNICK-HALL, M.L. and MORITZ, S., 2003. The impact of e-HR on the human resource management function. *Journal of Labor Research,* **24**(3), pp. 365-379.

LIN, H., 2010. Applicability of the Extended Theory of Planned Behavior in Predicting Job Seeker Intentions to Use Job-Search Websites. *International Journal of Selection and Assessment,* **18**(1), pp. 64-74.

LINKEDIN, 2015-last update, About us. Available: https://www.linkedin.com/about-us [10/19, 2015].

LINN, V.R., 2014. How to become an employer of choice: transforming employer brand associations into employer first-choice brands. *Journal of Marketing Management,* **30**(13-14), pp. 1486.

LIPSMAN, A., 2014-last update, **Major Mobile Milestones in May: Apps Now Drive Half of All Time Spent on Digital**. Available: https://www.comscore.com/Insights/Blog/Major-Mobile-Milestones-in-May-Apps-Now-Drive-Half-of-All-Time-Spent-on-Digital [10/07, 2015].

LOEB, S., 2012-last update, **Half of smartphone users in EU5 are into mobile gaming**. Available: http://vator.tv/news/2012-04-30-half-of-smartphone-users-in-eu5-are-into-mobile-gaming [10/12, 2015].

LOMAS, N., 2014-last update, **LinkedIn Mobile Usage Approaching A Majority — Now At 41%** [11/16, 2015].

LUONG, V.P., 2013. *Recruitment Management System.* Master of Software Engineering edn. University Of Bordeaux.

MAURER, R., 2015-last update, Use of Video for Recruiting Continues to Grow. Available: http://www.shrm.org/hrdisciplines/staffingmanagement/articles/pages/use-video-recruiting-grow.aspx [11/16, 2015].

MCLEAN, H., 2015. Pick and mix mobile TV. *TVB Europe,* , pp. 35-37.

METRO.CO.UK, 2015-last update, Konami gives up making console games – except for PES – claims report

. Available: http://metro.co.uk/2015/09/18/konami-gives-up-making-console-games-except-for-pes-claims-report-5397716/ [10/12, 2015].

MICHELS, B., J. and CHANG, C., 2011. Attending a Presentation at a Distance in Real- time via Skype. *TechTrends,* **55**(1), pp. 23-27.

MINGERS, J., 2001. Combining IS research methods: towards a pluralist methodology. *Information systems research,* **12**(3), pp. 240-259.

MOORE, G.C. and BENBASAT, I., 1991. Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information systems research,* **2**(3), pp. 192-222.

MYERS, M.D., 2013. *Qualitative research in business and management.* Sage.

NATIONAL CENTER FOR POSTSECONDARY IMPROVEMENT, 2003-last update, **Sample Interview Protocol Form** [Homepage of National Center for Postsecondary Improvement], [Online]. Available: https://web.stanford.edu/group/ncpi/unspecified/student_assess_toolkit/sampleInterviewProtocol.html [02/11, 2016].

NEUMAN, W.L., 2005. *Social research methods: Quantitative and qualitative approaches.* Allyn and bacon Boston, MA.

NEWELL, S., 2005. Recruitment and selection. *Managing Human Resources: Personnel Management in Transition,* , pp. 115-147.

NEWMAN, E., 2015. *Fifth Corporate Mobile Readiness Report.* 5. iMomentous.

NEWMAN, E., 2012. *First Corporate Mobile Readiness Report.* 1. iMomentous.

NIKLAS, S.J. and BÖHM, S., 2011. Applying Mobile Technol-ogies for Personnel Recruiting--An Analysis of User-Sided Acceptance Factors. *International Journal of eBusiness and eGovernment Studies,* **3**(1), pp. 169-178.

NIKLAS, S.J., BÖHM, S. and STROHMEIER, S., 2012. MOBILE JOB BOARD APPLICATIONS – WHICH ARE THE KEY SUCCESS FACTORS? A LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK.

NUNNALLY, J.C., BERNSTEIN, I.H. and BERGE, J.M.T., 1967. *Psychometric theory.* JSTOR.

OECD, 2013. *"The App Economy", OECD Digital Economy.*

OFCOM, 2014-last update, *Active reach of Facebook and YouTube for viewing video on mobile as of August 2014, by country*. Available: http://www.statista.com/statistics/284808/active-mobile-video-reach-of-facebook-and-youtube-by-country/ [10/09, 2015].

OLIVEIRA, T. and MARTINS, M.F., 2011. Literature review of information technology adoption models at firm level. *The Electronic Journal Information Systems Evaluation,* **14**(1), pp. 110-121.

PARRY, E. and TYSON, S., 2008. Can technology transform HR processes? The case of UK recruitment, *The second European academic workshop on electronic human resource management* 2008.

PARRY, E. and WILSON, H., 2009. Factors influencing the adoption of online recruitment. *Personnel Review,* **38**(6), pp. 655-673.

PEDERSEN, P.E., 2005. Adoption of mobile Internet services: An exploratory study of mobile commerce early adopters. *Journal of organizational computing and electronic commerce,* **15**(3), pp. 203-222.

PERENSON, M., 2008-last update, **Google Launches Android Market**. Available: http://www.techhive.com/article/152613/google_android_ships.html [10/13, 2015].

PEREZ, S., 2015-last update, **Consumers Spend 85% Of Time On Smartphones In Apps, But Only 5 Apps See Heavy Use**. Available: http://techcrunch.com/2015/06/22/consumers-spend-85-of-time-on-smartphones-in-apps-but-only-5-apps-see-heavy-use/#.368ism:5bJy [10/14, 2015].

PEREZ, S., 2014-last update, **Majority Of Digital Media Consumption Now Takes Place In Mobile Apps**. Available: http://techcrunch.com/2014/08/21/majority-of-digital-media-consumption-now-takes-place-in-mobile-apps/ [10/09, 2015].

PETERSON, R.A. and KIM, Y., 2013. On the relationship between coefficient alpha and composite reliability. *Journal of Applied Psychology,* **98**(1), pp. 194.

PROTALINSKI, E., 2015-last update, **Facebook passes 1.44B monthly active users and 1.25B mobile users; 65% are now daily users**. Available:

http://venturebeat.com/2015/04/22/facebook-passes-1-44b-monthly-active-users-1-25b-mobile-users-and-936-million-daily-users/ [09/10, 2015].

QUINN, C., N., 2011. *Designing mLearning : Tapping into the Mobile Revolution for Organizational Performance.* Pfeiffer.

RAJARAMAN, V., 2005. Building blocks of e-commerce, *Sadhana (Academy Proceedings in Engineering Sciences)* 2005, Indian Academy of Sciences, pp. 89-117.

RIEMENSCHNEIDER, C.K., HARRISON, D.A. and MYKYTYN, P.P., 2003. Understanding IT adoption decisions in small business: integrating current theories. *Information & Management,* **40**(4), pp. 269-285.

RIPLEY, H.D., 2012. Untapped Revenue: Smartphones, A Smart Move for the Music Industry.

ROETTGERS, J., 2014-last update, **Netflix may add short-form content to increase mobile usage**. Available: https://gigaom.com/2014/09/05/netflix-short-clips/ [10/09, 2015].

ROGERS, E.M., 2010. *Diffusion of innovations.* Simon and Schuster.

ROGERS, E.M., 2003. *Diffusion of Innovation.* 5th edn.

SAN MARTÍN, S., LÓPEZ-CATALÁN, B. and RAMON-JERONIMO, M.A., 2012. Factors determining firms' perceived performance of mobile commerce. *Industrial Management & Data Systems,* **112**(6), pp. 946-963.

SAUNDERS, M., LEWIS, P. and THORNHILL, A., 2009. *Research methods for business students.* 5. ed. edn. Harlow: .

SHAW, T., 2011-last update, **Push Notifications for Mobile Recruitment/HR Apps** [11/07, 2015].

SHIH, Y. and FANG, K., 2004. The use of a decomposed theory of planned behavior to study Internet banking in Taiwan. *Internet Research,* **14**(3), pp. 213-223.

SIMPSON, P. and JENKINS, P., 2015. Gamification and Human Resources: an overview.

SINGH, P. and FINN, D., 2003. The effects of information technology on recruitment. *Journal of Labor Research,* **24**(3), pp. 395-408.

SINGH, P. and FINN, D., 2003. The effects of information technology on recruitment. *Journal of Labor Research,* **24**(3), pp. 395-408.

SMITH, C., 2015-last update, **50 Amazing Netflix Statistics and Facts** [Homepage of DMR], [Online]. Available: http://expandedramblings.com/index.php/netflix_statistics-facts/ [10/09, 2015].

STANTON, L., 2012. Using video as a recruiting tool: Why & how. *HR Specialist,* **10**(10), pp. 7-7.

STATISTA, 2014-last update, *Most popular mobile commerce product categories among smartphone buyers in Europe as of March 2014*. Available: http://www.statista.com/statistics/305231/smartphone-shopping-product-categories-europe/ [10/05, 2015].

STATISTA, 2014-last update, *Number of digital game users in the United Kingdom (UK) from 2014 to 2020, by category*. Available: http://www.statista.com/statistics/456040/digital-game-users-category-digital-market-outlook-uk/ [11/14, 2015].

STATISTA, 2014-last update, *Number of digital games users in the United Kingdom (UK) in 2015, by age group and gender (in millions)*. Available: http://www.statista.com/statistics/461273/digital-games-users-age-gender-digital-market-outlook-uk/. [11/14, 2015].

STERLING, G., 2014-last update, First Half Ad Revenue: Search Dominates PC Ads But Not Mobile. Available: http://searchengineland.com/search-drives-5-3-billion-mobile-ad-revs-206248 [10/13, 2015].

STEVENS, J.P., 1992. *Applied multivariate statistics for the social sciences.* Routledge.

STEWART, R., 2015-last update, **5 key recruitment trends of 2015**. Available: http://www.talentculture.com/talent-management/5-key-recruitment-trends-for-2015/ [09/23, 2015].

STOICA, M., MILLER, D.W. and STOTLAR, D., 2005. New Technology Adoption, Business Strategy and Government Involvement: The Case of Mobile Commerce. *Journal of Nonprofit & Public Sector Marketing,* **13**(1/2), pp. 213-232.

SULLIVAN, J., 2015-last update, **The Top 10 'Bleeding Edge' Recruiting Trends To Watch In 2015**. Available: http://www.eremedia.com/ere/the-top-10-bleeding-edge-recruiting-trends-to-watch-in-2015/ [23/09, 2015].

SUNDBERG, J., 2015-last update, **How European Companies Use Social Media Recruitment** [Homepage of Link Humans], [Online]. Available: http://linkhumans.com/blog/social-recruiting-europe [10/07, 2015].

TAN, M. and TEO, T.S., 2000. Factors influencing the adoption of Internet banking. *Journal of the AIS,* **1**(1es), pp. 5.

TAYLOR, S. and TODD, P., 1995. Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International journal of research in marketing,* **12**(2), pp. 137-155.

TAYLOR, S. and TODD, P.A., 1995. Understanding information technology usage: A test of competing models. *Information systems research,* **6**(2), pp. 144-176.

TEO, H., WEI, K.K. and BENBASAT, I., 2003. Predicting intention to adopt interorganizational linkages: An institutional perspective. *MIS quarterly,* , pp. 19-49.

THOMAS, S., L. and RAY, K., 2000. **Recruiting and the web: High-tech hiring**.

THOMSON, W., 2014-last update, **Advantages and Disadvantages of Mobile #mobilerecruit**. Available: http://www.blogging4jobs.com/mobile-2/advantages-disadvantages-mobile/#iePkEJfes0vD2As1.97 [11/07, 2015].

TO, P., LIAO, C., CHIANG, J.C., SHIH, M. and CHANG, C., 2008. An empirical investigation of the factors affecting the adoption of Instant Messaging in organizations. *Computer Standards & Interfaces,* **30**(3), pp. 148-156.

TORNATZKY, L. and FLEISCHER, M., 1990. The process of technology innovation, Lexington, MA. *Lexington Books.Trott, P.(2001).The Role of Market Research in the Development of Discontinuous New Products.European Journal of Innovation Management,* **4**, pp. 117-125.

TWITTER, 2015. ***Twitter Reports Third Quarter 2015 Results***.

UBER, 2015-last update, **Your UberDRIVE Mobile Game Is Arriving Now**. Available: http://newsroom.uber.com/2015/06/uberdrive/ [11/16, 2015].

UM LONDON and EMARKETER, 2014-last update, *Smartphone user penetration as percentage of total population in Western Europe from 2011 to 2018**. Available: http://www.statista.com/statistics/203722/smartphone-penetration-per-capita-in-western-europe-since-2000/ [01/07, 2016].

VAN PAESSCHEN, H. and VIS, D., 26/02/2015, 2015-last update, Mobile shopping in Europe and North America: Key Figures and Trend 2014-2015 [Homepage of Shopify], [Online]. Available: http://ecommercenews.eu/key-figures-mobile-commerce-europe-revealed/ [10/06, 2015].

VENKATESH, V., MORRIS, M.G., DAVIS, G.B. and DAVIS, F.D., 2003. User acceptance of information technology: Toward a unified view. *MIS quarterly,* , pp. 425-478.

WAGNER, K., 2015-last update, **Facebook Users Are Notching Four Billion Video Views Every Day**. Available: http://recode.net/2015/04/22/facebook-users-are-notching-four-billion-video-views-every-day/ [10/09, 2015].

WALKER, R., 2015-last update, Can SoundCloud Be the Facebook of Music?. Available: http://www.bloomberg.com/news/features/2015-07-10/can-soundcloud-be-the-facebook-of-music- [15/11, 2015].

WANG, Y., MEISTER, D. and WANG, Y., 2012. Reexamining relative advantage and perceived usefulness: an empirical study. *Learning Tools and Teaching Approaches through ICT Advancements,* , pp. 260.

WATSON, D., WEBER, K., ASSENHEIMER, J.S., CLARK, L.A., STRAUSS, M.E. and MCCORMICK, R.A., 1995. Testing a tripartite model: I. Evaluating the convergent and discriminant validity of anxiety and depression symptom scales. *Journal of abnormal psychology,* **104**(1), pp. 3.

WE ARE SOCIAL, 2014-last update, *Share of population using mobile broadband in Eastern Europe as of February 2014*
[Homepage of Statista], [Online]. Available: http://www.statista.com/statistics/239119/mobile-internet-penetration-in-eastern-europe/ [10/07, 2015].

WEEKES, S., 2014. Firms turn off talent on mobile. *Recruiter,* , pp. 38-40.

WILLARD, C., 2011-last update, **Invest in the fastest growing industry ever before it's too late** [Homepage of http://blogs.marketwatch.com/cody/2011/07/12/how-to-invest-in-the-fastest-growing-industry-in-history/], [Online] [07/10, 2015].

WIXOM, B.H. and WATSON, H.J., 2001. An empirical investigation of the factors affecting data warehousing success. *MIS quarterly,* , pp. 17-41.

WU, J. and WANG, S., 2005. What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model. *Information & management,* **42**(5), pp. 719-729.

WU, P.F., 2011. A mixed methods approach to technology acceptance research. *Journal of the AIS,* .

YANG, K.C., 2005. Exploring factors affecting the adoption of mobile commerce in Singapore. *Telematics and Informatics,* **22**(3), pp. 257-277.

ZALL, M., 2000. Recruiting and the Internet. *Fleet Equipment,* **26**(10), pp. 39-43.

ZAPPE, J., 2011. For Recruiting, Video is Hot (and Cold). *Journal of Corporate Recruiting Leadership,* **6**(1), pp. 17-21.

ZHOU, T., LU, Y. and WANG, B., 2010. Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior,* **26**(4), pp. 760-767.

ZIELINSKI, D., 2015. The Gamification of Recruitment. *HR Magazine,* **60**(9), pp. 59-61.

APPENDIX A

Latent Variable Correlations and Discriminant Validity												
	ADV	ATT	CAND	COMP	CPTT	CPX	FACC	INT	PBC	SELF	SN	USE
ADV	0,7673											
ATT	0,6546	0,9479										
CAND	0,3483	0,3736	0,8244									
COMP	0,3338	0,4116	0,4119	0,8797								
CPTT	0,4147	0,5422	0,5649	0,3701	0,7397							
CPX	0,3052	0,3048	0,4097	0,2699	0,3039	0,9142						
FACC	-0,0860	-0,0443	-0,1196	0,0977	-0,0168	-0,1336	0,8919					
INT	0,6697	0,8669	0,4799	0,4348	0,5581	0,3761	-0,0610	0,9551				
PBC	0,3616	0,4315	0,3089	0,5482	0,3497	0,3243	0,1242	0,3710	0,8110			
SELF	0,2074	0,1965	0,1097	0,1292	0,1416	0,2418	-0,0664	0,1734	0,3322	0,7810		
SN	0,3678	0,4422	0,5220	0,6022	0,5209	0,3089	0,0456	0,4985	0,4299	0,0543	0,8139	
USE	0,2931	0,2956	0,2312	0,3765	0,2749	0,3104	0,1736	0,3990	0,2227	0,1837	0,3195	0,9692

*Square-root of Average Variance Extracted shown on Diagonals.

APPENDIX B

FACTORS LOADING												
	ADV	**ATT**	**CAND**	**COMP**	**CPTT**	**CPX**	**FACC**	**INT**	**PBC**	**SELF**	**SN**	**USE**
Advantage1	0,8187	0,5648	0,2234	0,2825	0,3251	0,2414	-0,0711	0,5623	0,3194	0,1563	0,2924	0,2893
Advantage2	0,8323	0,5468	0,2706	0,2558	0,249	0,2344	-0,0056	0,5443	0,3206	0,2209	0,2901	0,1839
Advantage3	0,7435	0,4563	0,2711	0,2047	0,4136	0,1893	-0,0647	0,4987	0,2191	0,0893	0,3537	0,274
Advantage4	0,8176	0,547	0,336	0,2935	0,3772	0,2687	-0,0579	0,5834	0,3271	0,1796	0,3352	0,2288
Advantage5	0,712	0,4005	0,1971	0,2488	0,2472	0,1976	-0,0844	0,4055	0,1701	0,1558	0,2071	0,1434
Advantage6	0,6869	0,4143	0,2765	0,2368	0,2942	0,225	-0,0313	0,4448	0,2529	0,0701	0,2248	0,2667
Advantage7	0,7474	0,5457	0,2912	0,2642	0,323	0,2716	-0,1455	0,5265	0,2971	0,2136	0,2595	0,1903
Attitude1	0,638	0,9685	0,3543	0,4155	0,5084	0,316	-0,0526	0,8698	0,4175	0,1889	0,4006	0,3213
Attitude2	0,6033	0,9398	0,3762	0,3976	0,5277	0,2927	0,0158	0,7974	0,4164	0,183	0,4434	0,2394
Attitude3	0,6195	0,935	0,3322	0,3557	0,5069	0,2561	-0,0884	0,7953	0,3932	0,1869	0,4154	0,2772
Candidate1	0,2836	0,2842	0,8014	0,3182	0,4595	0,3064	-0,107	0,3762	0,1616	0,1178	0,3982	0,0842
Candidate2	0,2763	0,2564	0,8182	0,3814	0,4137	0,3561	-0,1098	0,3567	0,2847	0,0385	0,4353	0,2263
Candidate3	0,3014	0,379	0,8528	0,3193	0,5221	0,3486	-0,0807	0,451	0,3082	0,1163	0,455	0,2501
Compatibility1	0,2801	0,3832	0,4393	0,8897	0,3947	0,261	0,1151	0,3905	0,4783	0,0961	0,5495	0,3544
Compatibility2	0,3371	0,3471	0,3165	0,8621	0,3062	0,2459	0,0698	0,3841	0,4884	0,1541	0,5602	0,3673
Compatibility3	0,2856	0,3186	0,3643	0,9139	0,3102	0,2425	0,0715	0,3451	0,4979	0,1372	0,5141	0,3191
Compatibility4	0,2729	0,3878	0,3234	0,8516	0,2852	0,2009	0,083	0,4012	0,4646	0,0748	0,4924	0,2837
Competitor1	0,2144	0,3629	0,4358	0,2319	0,7708	0,2564	0,0506	0,4015	0,1486	0,1114	0,3526	0,2907
Competitor2	0,1219	0,0798	0,1653	0,0217	0,5218	0,0714	-0,0662	0,061	0,116	0,1098	0,2052	-0,0423
Competitor3	0,4741	0,5953	0,5483	0,4301	0,8804	0,2871	-0,0352	0,602	0,4164	0,1089	0,5182	0,2619
Complexity2	0,2601	0,2775	0,3708	0,2588	0,2469	0,9135	-0,1319	0,3256	0,3291	0,249	0,2635	0,2883
Complexity3	0,2978	0,2797	0,3783	0,2348	0,3085	0,9149	-0,1125	0,3619	0,2641	0,1934	0,3011	0,2792
Control1	0,278	0,3376	0,1371	0,3237	0,2655	0,3017	-0,0105	0,2311	0,7479	0,2934	0,1951	0,1655
Control2	0,3313	0,4032	0,2834	0,5811	0,2903	0,246	0,2361	0,3698	0,9141	0,3118	0,4397	0,2666
Control3	0,2655	0,2979	0,3346	0,3798	0,3095	0,2649	0,0066	0,2823	0,7602	0,191	0,3871	0,0678
Facilitators2	-0,0037	0,0039	-0,0961	0,0145	-0,008	-0,1171	0,8643	-0,0183	0,0964	-0,0827	-0,048	0,1708
Facilitators3	-0,1345	-0,0737	-0,1156	0,1447	-0,0205	-0,1215	0,9187	-0,0831	0,1227	-0,0412	0,1106	0,1433
Intention1	0,6496	0,8149	0,4409	0,4385	0,4744	0,381	-0,0663	0,9429	0,345	0,1556	0,4376	0,4341
Intention2	0,6332	0,8441	0,445	0,3781	0,5584	0,3047	-0,0395	0,9543	0,3558	0,1639	0,4691	0,3009
Intention3	0,6361	0,8254	0,4884	0,4281	0,5666	0,3901	-0,0684	0,968	0,3623	0,1772	0,5212	0,4057
Pressure1	0,216	0,325	0,3637	0,1293	0,3711	0,1827	-0,1659	0,3166	0,1558	0,0463	0,566	-0,0419
Pressure2	0,318	0,3446	0,4394	0,6176	0,4398	0,2836	0,1153	0,4203	0,3869	0,0363	0,9059	0,3464
Pressure3	0,3467	0,4031	0,4604	0,6458	0,4518	0,2747	0,1169	0,4622	0,4637	0,0504	0,92	0,4082
Selfefficacy1	0,2326	0,253	0,0104	0,1372	0,1107	0,1171	-0,0169	0,1776	0,3006	0,8059	0,0661	0,1496
Selfefficacy2	0,1391	0,1725	0,195	0,1243	0,1741	0,2648	-0,1362	0,1786	0,2252	0,784	0,0978	0,2477
Selfefficacy3	0,0965	0,013	0,0779	0,0348	0,0521	0,2086	-0,0171	0,0437	0,2419	0,7522	-0,0384	0,0398
Usership2	0,2934	0,3026	0,218	0,3708	0,2752	0,3266	0,1639	0,4073	0,2397	0,1928	0,3357	0,9727
Usership3	0,2738	0,2687	0,2309	0,3586	0,2567	0,2721	0,1733	0,3638	0,1891	0,1616	0,2807	0,9657