APPLYING MOBILE TECHNOLOGIES FOR PERSONNEL RECRUITING –AN ANALYSIS OF USER-SIDED ACCEPTANCE FACTORS

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Abstract

The growing use of the mobile web and other mobile information technologies has opened up new opportunities for organizational communication. The implementation of the mobile channel in the personnel marketing mix offers interesting perspectives but is not yet widely applied. Similarly, knowledge about realization opportunities and empirical evidence on user acceptance is missing so far. In order to provide some informative background and theoretical foundation, this study will demonstrate the opportunities of applying mobile technologies for personnel recruiting. First, we will describe the concept of mobile recruiting and the underlying mobile technologies and services. Afterwards, we will investigate the user-sided acceptance of such offerings. For this purpose, we propose a technology acceptance model adjusted to the context of mobile services for personnel recruiting. The compiled model will be empirically tested and findings will be discussed concerning further research and practical implementation.

Key Words: *Mobile Services, Mobile Recruiting, Personnel Marketing, m-HRM*
JEL Classification: J29, L82, L84, L86

1. INTRODUCTION

Changes in the economic and demographic environment have increased the shortage of qualified employees and thus, the "war for talents" over the last years (Thomas&Ray,2000). Especially apprenticeships as well as professionals in new and innovative businesses have been affected. This development has been

accompanied by changes in media use. Media consumption is now spread over an increasing number of competing media channels. Recruiting managers must decide on the appropriate distribution of their media budgets. Some emerging media technologies might be sustainable –others a flash in a pan, vanishing after a short hype and failing because of a lack of user acceptance. Today, available jobs offers are posted online across all industries, either in online job portals or on corporate career websites. This kind of e-recruiting –a promising option for reaching a wider applicant pool, as well as more cost and time effective than other methods– emerged along with the growing popularity of the Internet in the mid-1990s and has significantly changed the recruiting landscape over the past decade. The deployment of web technologies and use of corporate career websites, job portals and search engines have cleared the way for more sophisticated, interactive and timely communication between job seekers and suppliers (Barber, 2006).

Whilst e-recruiting is common practice nowadays, the mobile channel is still developing as online did in the mid-1990s. Mobile communication is becoming ubiquitous and an increasing number of mobile subscribers are using advanced smartphones and have access to third generation mobile networks. By mid-2010, the worldwide number of mobile phone connections exceeded the five billion mark. And one third of all 650 million European phone subscribers already use broadband UMTS services (EITO,2010). Communication patterns are changing due to the fact that with these new technologies it is possible to be available and connected anytime and anywhere. This raises the managerial question whether or not to jump on the "mobile bandwagon". Similar to the question of extending recruiting activities online in the mid-1990s, organizations currently face the decision whether an engagement in the mobile field is required. Here, by extending conventional web-based services to the mobile channel, organizations and institutions can differentiate themselves in terms of customer attraction and retention. In regard to recruiting, applying mobile technologies could provide an efficient additional sourcing channel to better reach a targeted group of candidates –particularly young and innovation-interested applicants who are typically highly active in mobile media (Kargin et al.,2009). But in what ways are these solutions applicable and do the target groups also really want to receive and retrieve job information via their mobile phones? To explore this, as well as the potentials of these new and innovative methods of mobile personnel recruitment (m-recruiting), the research project "ReMoMedia –Recruiting in the Mobile Media", was initiated in 2008 at RheinMain University of Applied Sciences in Wiesbaden, Germany. The three-year project is funded by the German government and investigates

different aspects of the practicability, feasibility and user acceptance of applying mobile media technologies as an additional channel for personnel recruiting. Accompanying the practical implementation possibilities, scientific investigations of the success of such m-recruiting activities in terms of the user's acceptance of the mobile recruiting solutions are carried out. In line with that, this paper proceeds as follows: In the next section we will first present some technological opportunities for m-recruiting. Following, we will focus on the user-sided acceptance in Section 3. After a succinct review of technology acceptance literature, we will compile an m-recruiting-specific research model, explaining intention to use mobile devices for retrieving job information which will be empirically tested in the following section and discussed in the final part.

2. SCOPE OF M-RECRUITING OFFERINGS

The term m-recruiting refers to any organizational communication using mobile devices and technologies in order to attract and hire potential applicants and employees. During the last two decades, mobile devices and networks have evolved into universal communications systems. And today's systems support not only mobile voice communication but also mobile broadband access to the Internet and a wide range of value-adding services. This technical progress has been accompanied by improvements in device and user-interface technologies, e.g. device capabilities to install and execute application software, multi-touch displays to facilitate user interaction on small screens, embedded GPS receivers for determining current location, or sensors for measuring orientation or other parameters of the user environment. Taking into account the previously given definition, m-recruiting is already present when mobile voice telephony or SMS is used in recruiting communication. However, in a more narrow sense, m-recruiting refers to the deployment of innovative mobile technologies beyond traditional voice and messaging services.

Against this background, two important categories of mobile services can be differentiated with respect to m-recruiting. The first category refers to the mobile services commonly known from already existing stationary online offerings such as mobile-optimized job portals as well as mobile-optimized corporate career websites. In contrast, the second category comprises new service offerings based on mobile-specific features usually not available within fixed networks or desktop environments, like location-based services, for instance. In the following, this paper will focus on mobile information services such as retrieving job information from the Internet via mobile devices. This reflects the fact that existing web

offerings can be transferred to mobile-optimized career and recruiting websites with moderate effort and are therefore often a starting point for further m-recruiting activities. However, it is worth mentioning that m-recruiting offerings of the second service category have also already been realized. Some of the existing m-recruiting applications support location-based job search, visualizing available job offerings on maps, or even directly support applying for a job offer via mobile devices.

3. USER ACCEPTANCE OF M-RECRUITING

Research studies on acceptance of innovative information systems are often based on intention-based models, rooted in social and cognitive psychology (Venkatesh et al.,2007). A very well-known and widely applied model is the Technology Acceptance Model (TAM) by Davis et al. (Davis et al.,1989). Based on the Theory of Reasoned Action, it postulates that human behavior is determined by the intention to perform the behavior. TAM identifies two attributes that influence an individual's behavioral intention (BI) to use a technology, namely, perceived usefulness and perceived ease of use. Here, perceived usefulness (PU) is seen as the extent to which using a system is perceived to enhance individual job performance, and perceived ease of use (PEOU) refers to a person's belief that using the system is free of effort (Davis,1989). PEOU is also considered to influence PU, besides the direct effect on BI as already mentioned. TAM has established itself as a robust model, explaining usage intention and behavior (Venkatesh & Davis, 2000; Legris et al.,2003). However, its simplicity and lean structure has also appeared as one of the most frequent points of criticism. In order to improve the model, TAM and its underlying acceptance theory were extended to TAM2 and recently to TAM3. TAM2 adds processes of social influence and cognitive instrumental determinants as antecedents to PU (Venkatesh&Davis,2000). TAM3 further presents determinants on individual technology adoption and also introduces elements of context and individual differences like playfulness and enjoyment (Venkatesh&Bala,2008).

In the following, we suggest a TAM-based model for explaining acceptance of mobile recruiting. Originally, TAM was developed with respect to organizational use of information technologies. PU was solely attributed to a person's work performance and its perceived improvement through technology use (Davis et al.,1989). However, in the context of mobile technologies, PU refers more to the system's contribution to personal targets. In the study at hand, this is assumed to be the facilitation of gaining relevant job information by using a mobile device.

Findings on the significance of PEOU for mobile technology acceptance varied in prior studies. While some studies on mobile services found strong support on PU as well as on PEOU (Wang et al.,2006; Kuo&Yen,2009), other studies on mobile services acceptance did not support the significance of PEOU on BI (Bruner&Kumar,2005; Lu et al.,2010). However, the intention to use mobile devices for job information retrieval in particular requires a high familiarity with mobile technologies and thus, a relatively high initial level of PEOU. Therefore, it can be assumed that users should be proficient or else learn quickly and we suppose that PEOU has no direct effect on BI but an indirect one via PU.
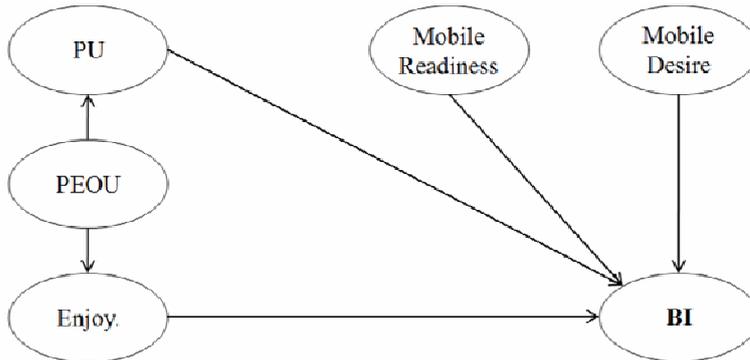
According to recent studies, perceived enjoyment has been identified as an important additional factor influencing user acceptance (Davis et al.,1992). In mobile settings, the significance of enjoyment as an influence on usage intention has already been proven, for example in the case of hedonic system usage like mobile gaming (Okazaki et al.,2008). However, also non- or just partly-hedonic usage contexts like the adoption of SMS services or mobile Internet have shown relevance for the enjoyment construct (Lu et al.,2010; Kim et al.,2008). In the case of mobile information services, users usually have the opportunity to defer usage to a later date when a desktop PC would be available. Thus, we suggest that the intention to use mobile recruiting offerings will also be influenced by an individual's perceived enjoyment, associated with the system's use, triggering instant usage. Nonetheless, due to the more distinct non-hedonic characteristic of job information retrieval itself, we also assume that PU plays the major role on BI. Additionally, we believe that a user would not be very pleased if handling is perceived as complex. Thus, we expect PEOU to influence perceived enjoyment.

It has been shown that perceptions of different influencing factors are controlled by individual personality factors (Aldás-Manzano et al.,2009). So, it can be expected that mobile-specific personality factors influence BI of mobile services. As the core feature of mobile technology usage is mobility per se, it is be assumed that users who have a high desire to be "always on" should also have a higher intention to use the mobile web in general, as well as in the context of m-recruiting in particular. So, we postulate that individual "mobile desire" will positively influence behavioral intention. Additionally, an individual's personal (mobile) technological innovativeness should directly influence his or her intention to use m-recruiting services. This relates to the concept of adopter categories of the diffusion of innovation (Rogers,2003). Therefore, people who are generally more interested in new and innovative features –also known as "innovators"– should also be uninhibited concerning the usage of mobile web

offerings in a job-related matter. Thus, we additionally added the construct of "mobile readiness" to the model, as a further antecedent of BI.

Altogether, we expect that the BI to also use the mobile web for job information retrieval will be influenced directly by the factors of PU, enjoyment, and personality factors of mobile desire and mobile readiness, as well as indirectly by PEOU. The assumptions regarding the mobile recruiting acceptance model are also depicted in Figure 1 and will be analyzed in the next section.

Figure-1: Mobile Recruiting Acceptance Model

4. EMPIRICAL INVESTIGATION

4.1 Research Design & Measurement

The above proposed m-recruiting acceptance model was analyzed via a paper-based survey which was conducted among 108 students. The questionnaire covered all six constructs of the m-recruiting acceptance model. Constructs were all measured as reflective indicators by multiple items. We used validated items from existing literature but with partly modified wording to adapt the respective item to the context at hand. For model analysis we used Partial Least Squares, a component-based structural equation modeling technique (Ringle et al.,2005).

Before assessing the structural model, reliability of the measurement model needed to be checked. Therefore, we first assessed multi-item scale reliability according to the loadings of the respective construct (Chin,1998). Here, a common threshold is 0.6 or rather 0.7. Factor loadings in this study ranged between 0.665 and 0.961 and proved to be highly significant according to their t-

values (all >1.960), obtained via Bootstrapping technique. Thus, first results indicate that all items were appropriate measures for their respective construct. Construct reliability in turn was assessed by composite reliability (CR), Cronbach's α, and average extracted variance (AVE). All constructs met the claim of 0.7 for Cronbach's α and CR as well as 0.5 for AVE as shown in Table 1 below.

Table-1: Construct reliability

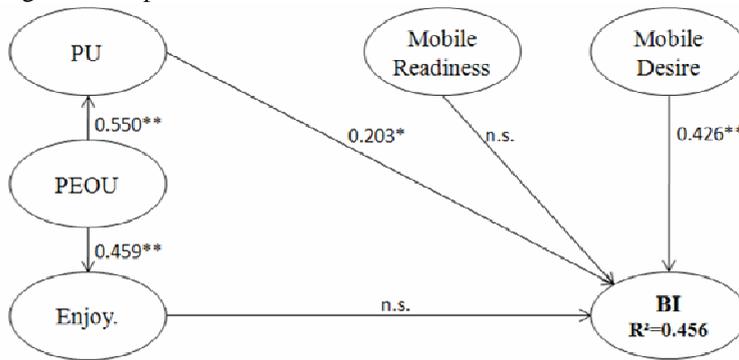|	Cronbach's α	CR	AVE
Behavioral Intention	0.870	0.920	0.794
Perceived Usefulness	0.880	0.926	0.807
Perceived Ease of Use	0.697	0.878	0.766
Perceived Enjoyment	0.949	0.962	0.901
Mobile Desire	0.833	0.900	0.750
Mobile Readiness	0.864	0.898	0.641

4.2 Results

As advised by Henseler et al. (Henseler et al.,2009), we assessed the structural model by its coefficient of determination (R^2), estimates for path coefficients as well as prediction relevance of the particular constructs (Q^2). The overall model shows a moderate explanation of the behavioral intention to use mobile devices for the retrieval of job-related information with 0.456, thus exceeding the 0.33 threshold (Henseler et al.,2009). The results of the structural model are all represented in Figure 2.

As expected, PEOU had a considerable and significant influence on both PU (0.550) and perceived enjoyment (0.459). The influence of PU in turn was not that strong (0.203) but can still be considered meaningful (Chin,1998), and also proved to be significant (t=2.098). Interestingly, and in contrast to the assumptions made above, perceived enjoyment had no significant influence on BI. Nor did the personality factor of mobile readiness, which had a low path coefficient (0.138), just under the significance threshold of 1.96 with t=1.913 and thus not passing the guidance level of probability value <0.05. However, the personality variable of perceived mobile desire had the strongest influence on BI with 0.426 and was also highly significant (t=4.292). Cross validation redundancy index Q^2 was obtained by using Smart PLS Blindfolding technique and was larger

than zero for all endogenous latent variables' indicators, thus showing they provide predictive relevance (Henseler et al.,2009).

Figure-2: Empirical Results

Significance Levels: * p < 0.05, ** p < 0.001

5. DISCUSSION

The study was conducted to get an insight into the user-sided acceptance of mobile technology usage in a recruiting context. In order to make some suggestions for managerial decisions on m-recruiting activities, we worked out relevant factors to explain user-sided acceptance and use. Although usage can and will be influenced by many different factors, a target group's basic usage intention is an elementary condition for m-recruiting success. As results show, a most important antecedent of behavioral intention is an individual's mobile desire, i.e. the desire to be always on and to be always connected. Seeing mobile desire as a personal predisposition, it appears obvious that people who are used to being connected anytime and anywhere may also be more interested in using the mobile web to look for job-related information. The results of PU and enjoyment were relatively astonishing: while the PU to use the mobile web for retrieving job-related information has a moderate influence on BI, enjoyment seems to be of little importance. According to existing literature, this could be explained by the fact that enjoyment is just said to be relevant for purely hedonic scenarios (van der Heijden,2004; Okazaki et al.,2008) or that enjoyment does not provide a basis for forming beliefs about system usage but will become relevant over time (Venkatesh&Bala,2008). To that effect it can be assumed that respondents of the survey simply had a weak picture of what using a mobile in the context of m-recruiting is about and therefore, also a too unclear image of the associated

enjoyment. Here, further research into perceived enjoyment on different times of observations would be necessary. Despite this, the present findings suggest that drivers for m-recruiting acceptance are of a strong, inherently personal nature. From a managerial point of view, this implies that m-recruiting activities today should focus on "mobile-minded" target groups. Users need to be "activated" by offering a recognizable added value for consumption while being "on the move". On the other hand, the results support the conclusion that it is not enough for an m-recruiting offering to appear innovative and entertaining to be accepted by users. To conclude, the acceptance of m-recruiting strongly depends on the further proliferation and familiarization of users with mobile services, generating a "mobile desire" in general. Options for directly attracting target groups for m-recruiting are limited and should concentrate on the perceived usefulness by emphasizing the capability and advantages of using the mobile web compared to existing channels.

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