

Virtual HRM: A Case of e-Recruitment

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Abstract. Although electronic recruitment is a widespread managerial practice of acquiring personnel, it still remains unclear exactly which organisational processes fall under its existing definitions. The research presented in this paper attempts to answer the fundamental question whether e-recruitment should be understood as means of automating the process of recruitment, or rather be treated as a more complex organisational concept. To clarify this issue the paper discusses the phenomenon from the open-system organisational perspective of virtual organising. The paper draws on the results of the qualitative exploratory study conducted in Denmark in 2008-2009. It concludes that as organisational concept e-recruitment is not only about application of technology to recruitment tasks. The process of e-recruiting spans organisational boundaries and directed to and affected by external environment of organizations.

1 Introduction

The internet and the availability of supporting information and communication technologies (ICT) have brought radical change to corporate recruiting [4] by significantly altering the traditional process of job advertising, CV screening, short-listing and communication with candidates [5]. A contemporary recruitment process happens often with the help of electronic recruitment systems called e-recruitment or e-cruitment. Such systems are often connected to external online job and CV databases available on 24/7 basis, which act as labour market intermediaries [10, p. 112]. Some research suggests that e-recruitment generates higher application turnover [17], shortens by 2/3 the time taken from job being posted to it being offered to a candidate [23] and is increasingly cost-effective [5].

Although there are already a number of research contributions to the subject of electronic recruitment, it is still difficult to find a clear definition of what precisely should be understood under the term e-recruitment. Dictionary of Human Resource Management [10] defines e-recruitment as recruitment of employees on the internet. According to the dictionary, e-recruitment assumes a number of different forms, i.e. advertising vacancies on websites, internet job boards that act as labour market intermediaries, internet directories that list job vacancies and allow free connection from the directory to the company websites [10, p.112]. Lee [13] on the other hand in defining e-recruitment emphasises the technological aspect by incorporating a more

general notion of electronic means, which organisations utilise in their e-recruiting practices and activities to “fill open positions effectively and efficiently”.

One of the purposes of the paper is to work out a clearer understanding of what can be understood under the organisational concept of e-recruitment and define its scope and elements. To fulfil this task, an exploratory study of recruitment practices was conducted in Denmark in the years 2008 and 2009. The overall research question guiding the study was whether e-recruitment should be viewed as a technological way of supporting recruiting services, or a broader organisational phenomenon affecting an overall HR practice and the organisation.

The paper argues that in order to unfold the essence of the concept of e-recruitment it is necessary to view e-recruitment as an integral part of a broader e-HRM organisational phenomenon also called virtual HRM [14]. The paper also suggests classifying e-recruitment as a case of virtual organising, which is characterised by three distinct interdependent dimensions – technological, organisational and social-cognitive and includes external environment in analysis [11].

The paper is structured as follows. First, it discusses the concepts on e-HRM, e-recruitment and the concept of virtual organising. Second, it presents results of the explorative study of recruitment practices conducted in Denmark in 2008-2009. Finally, it draws a number of general and specific conclusions and suggests some implications and areas for future research in the field of e-recruitment and e-HRM.

2 Theoretical Background

2.1 e-Recruitment and e-HRM

Recruitment of personnel in organisations is crucial for successful performance of HRM [16, p. 179]. Therefore, viewing e-recruitment and supporting its activities from a broader e-HRM umbrella appears to be reasonable and in line with existing definitions of e-HRM. For example, Lepak and Snell [14] define e-HRM, which they also call virtual HRM, as a network-based structure built on partnerships and typically mediated by information technologies to help the organisation acquire, develop and deploy intellectual capital, which allows considering e-recruitment to play an essential role in this process.

Other definitions of e-HRM also emphasise a crucial role of information and communication technologies (ICT) and network structures. Strohmeier [21] defines e-HRM as planning, implementation and application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities. Ruël, Bondarouk & Looise [18] view e-HRM as a way of implementing HR strategies, policies and practices in organisations through a conscious and directed support of and/or with the full use of web-technology-based channels. Both definitions support the notion that e-recruitment should be viewed as part of a broader e-HRM framework, and also as a part of a larger HR system [7].

2.2 The Process of Recruitment

Traditionally, the recruitment process includes repetitive phases such as: (i) job analysis and identification of hiring needs, (ii) preparation of job description and specifications, (iii) attracting applicants, (iv) receiving and screening applications, (v) short-listing candidates, (vi) meeting, testing and interviewing candidates and finally selecting and hiring employees. ICT were used in this traditional recruiting process even before the introduction e-recruitment systems, but were limited to the automation of the internal process or advertising on a corporate website [13]. Various information systems (IS) have already been employed by many HR departments for streamlining operations and alleviating much of the administrative burden (ibid.), and a good deal of research has already been carried out on HR information systems (HRIS) [18]. HRIS is understood to be directed towards the HR department itself and is to be used by HR staff (ibid.).

This operational use of ICT, however, does not turn HR tasks of recruiting personnel into e-recruitment systems for a number of reasons. First and foremost, one has to include the processes initiated by organisations on the Web: attracting qualified candidates often takes place through internet-based intermediaries like external online job databases and job boards. Contemporary e-recruitment systems allow practically instant communication with applicants, and submission of applications and resumes takes place in real-time and most often directly to the e-recruitment database located internally in an organisation. Increasingly, e-recruitment is used as means of marketing of the organisation and even integrated in overall marketing campaigns [4]. Also companies using e-recruiting are moving towards integrated HR systems of staffing, career development, training, performance and other key activities, which often require reorganisation of the HR process and better alignment of HR information and database architectures [7]. Using e-recruitment arrangements thus goes beyond the goal of economic efficiency of recruitment as it leads to a wider consequence for the organisation itself as well as its environment.

2.3 Open System Approach to Research in e-Recruitment

As it becomes apparent that the organisational environment, represented in case of recruitment by labour markets, partners, intermediaries, users, and society in general, plays an integral part in organising of e-recruitment, it makes it also adequate to investigate e-recruitment from an open-system perspective of organisations, which include both organisations and their environments. Open-system theories treat organisations as a complex set of dynamically intertwined and interconnected elements, including inputs, processes, outputs, feedback loops and the environment in which it operates [19, p. 477].

The idea of investigating traditional recruitment practices from an open-system perspective is not new, particularly under a wider HRM level. For example, Wright and Snell [24] used an open-system model for generating HRM strategies. They proposed that the inputs in HR systems are competences, skills, abilities of individuals, imported from external environments, the throughput process can be characterised by

the individuals' behaviour, and the outputs consist of both performance variables (e.g. productivity, efficiency) and affective outcomes (e.g. job satisfaction).

Wright and Snell's model [24] however, does not place technology in the core of the HRM strategies, yet technology embedded in the processes of e-recruitment cannot simply be treated as contingency, as it may lead to different outcomes if embedded in different ways in different social systems [2]. The challenge in studying e-recruitment from an organisational perspective is hence in accommodating technology, its users, organisations and their environment in a cohesive research framework.

2.4 The Concept of Virtual Organising

The task of studying recruitment with socially embedded technological systems can be potentially solved with the application of the three-dimensional framework for studying virtual organising suggested by Holm and Ulhøi [11, 12]. The framework draws on the organisation and management theory and IS research and is based on the presumption that virtual organising: 1) can be understood as organisation of activities facilitating time- and space-independent interaction and collaboration; 2) requires appropriate organisation, technology and human agents and cannot exist without all three components; and 3) is a strategic choice characterised by directionality and granularity, i.e. different levels of organising. Most important is that it allows studying virtually organised activities beyond intra-organisational levels of analysis and includes "external" levels like e.g. close-network relationships with various partners (suppliers, customers and individuals) as well as a broader society in general.

If e-recruitment falls in the conceptual framework of virtual organising then it becomes possible to talk of e-recruitment as a case of virtual organising and a manifestation of organisation virtualisation – a process through which parts or entire organisations are becoming distributed in time and space, and where physical means little or nothing [11].

3 Methodology and Approach

3.1 Research Design

In order to fulfil the purpose of the study, an explorative inquiry in contemporary recruitment was undertaken, with data collection techniques stemming from qualitative research methods [6]. The choice of the research design and method rests on the presumption that social science exploration would permit a discovery of generalisations leading to descriptions and understanding of the researched phenomenon [20, p. 3] and can potentially lead to development of grounded theory [9].

The main reasoning for choosing grounded-theory inspired approach comes from the believe that it is particularly useful at capturing complexity of contexts and facilitating theoretical work in substantive areas that have not been well researched by others [15]. A grounded-theory approach also facilitates what can be described as an

iterative process, meaning that “data collection and primary analysis proceeded in tandem, repeatedly referring back to each other” [3].

3.2 Research Framework

Although the underlying logic of an exploratory research is often an induction, the proposition suggesting that e-recruitment should be treated as a case of virtual organising led to applying a deductive approach [8, p. 6], which could potentially allow either confirming or rejecting this proposition.

The three-dimensional framework for studying virtual organising [12] was deployed to make research operational as well as to gain a common direction, initial insights and concepts [6]. As previously described, the framework rests on the proposition that virtual organising comprises interdependent organisational, technological and social-cognitive elements, which can be researched at different levels of an organisation. The framework also includes inter-organisational levels of analysis, like partners and customers, as well as society in general.

Using the framework, a set of questions was developed for guiding the research and conducting semi-structured interviews. In the course of iterative data collection and analysis, some initial questions were reviewed and some of them reformulated, and few either added or removed. It should be noted that in case of e-recruitment, customers are assumed to be represented by job seekers in general as well as specific job applicants and candidates.

3.3 Data

The acquisition of data followed the method of theoretical sampling based on concepts and themes deriving from the data [6]. Qualitative interviewing was the main technique used for collecting data.

In order to achieve higher validity of results, various sizes and types of organisations were included in the sample. More than half of the interviewed recruitment professionals were either representatives of a Danish multinational corporation (MNC) or a Danish branch of a foreign MNC. In total 14 organisations were included in the study.

All interviews were conducted in the Danish language and in Denmark in 2008 and 2009. Most of the interviews were semi-structured interviews with a few exceptions of a number of exploratory in-depth interviews and one focus group discussion, and lasted between one and two hours. Almost all interviewed respondents hold either high level managerial positions or are executive recruitment partners. To date 16 interviews are fully transcribed for further analysis.

However, interviews are rarely a sole form of data collection, especially if the research follows the path of developing-grounded theory [22], and some other types of data, like industry reports, professional presentations, face-to-face conversation with practitioners, corporate websites and brochures, professional forums, discussion boards and testimonials were also taken with some advantage. For example, a num-

ber of professional presentations by HR practitioners at the 2008 Annual HR Fair *Traefpunkt* in Copenhagen were recorded and transcribed for analysis.

3.4 Research Limitations

As mentioned earlier, most of the qualitative data were collected in Denmark in the years of 2008 and 2009, and are in Danish. Using the framework for studying virtual organising has also led to the realisation that the study was guided and framed by some specific predefined concepts, but as pointed out by Gibbs [8], this problem is often hard to eliminate completely, as researchers deduce particular explanations from general theories and see if the researched phenomena actually correspond [ibid., p. 5].

3.5 Data Analysis

Only preliminary data analysis has been conducted with major concepts and themes and their properties identified, but no theoretical comparisons [6] have been performed yet. Preliminary findings of the study are presented in the next section.

4 Research Findings

4.1 General Findings

Whether or not e-recruitment systems are deployed, it appears that the process of acquiring new personnel proceeds according to a similar cycle of phases as described earlier, i.e. job analysis and identification of hiring needs, preparation of job description and specifications, attracting applicants, receiving and screening applications, short-listing candidates, meeting, testing and interviewing candidates and selecting and hiring employees. e-Recruitment arrangements are almost entirely limited to the phases of attracting applicants, receiving and processing applications and to some extent screening candidates.

Basically, all organisations in the sample, which use e-recruitment systems for their staffing needs, did not experience substantial difficulties in acquiring and deploying such systems. The e-recruitment systems deployed seem to live up to HR managers initial expectations and needs.

Those recruiters, whose organisations do not deploy a dedicated e-recruitment system, also use ICT for recruitment purposes although to a rather limited extent. The practice of receiving applications and communications with the applicants through email without a supporting database is widespread, particularly among smaller and medium-sized organisations, and this practice cannot be called an e-recruitment system. Nevertheless, many use internet-based intermediaries for advertising of available vacancies.

It has been observed that there is a common believe that attracting best candidates requires not just good organisational reputation and a well-known name, but a consistent promotional effort often in conjunction with a promotional activity on a higher

and broader organisational level. Many respondents emphasise the importance of their employer branding activities. The term employer branding basically represents efforts to promote, both within and outside the firm, and a clear view of what makes it different and desirable as an employer [1], and here e-recruitment plays for some organisations a distinct role. Some organisations use creative online communications promoting themselves as good employers and an exciting place to work. Few bigger organisations facilitate video presentations of premises, recorded video testimonials of existing employees, and even periodically organise online job dating in real time with existing employees. Running of dedicated corporate recruitment websites is in several cases a task performed by HR, IT and communication departments conjointly.

Staff members in research organisations engaged in recruitment with the help of electronic means do not indicate any specific difficulties in using the provided technological solutions, and little or no initial training in using e-recruitment systems is normally required. Most system interfaces are described as being well designed and user-friendly.

In many cases larger-size organisations, which regularly receive a substantial number of applications, have entirely given up traditional paper-based reception of applications, requiring candidates to register and submit their data exclusively in electronic form. In cases where the flow of applications is automated, the recruitment personnel are particularly satisfied of not having to manually process incoming documents. Automatic response to applicants, which replaces the traditional response letter routine, also removes an undesirable burden from individual staff members. Also communication with other recruiting staff members and line managers with the help of e-recruitment systems allow quick and efficient processing of applications for the next phases in the recruitment cycle.

Automated screening of applicants with use of software is used to a very little extent, and practically in all cases screening and identification of potential candidates is done manually by recruitment personnel in cooperation with the managers responsible for the final hiring decision. E-recruitment systems at this stage are mainly used for tracking, sorting and categorising applicants, as well as informing them whether they are of any interest for the organisation or not. Telephone screening still seems to be widely used, but the use of videoconferencing for screening and interviewing tends is rather an exception than common practice.

Many interviewed organisations are in stable partnerships with internet-based job intermediaries, which have become the main source of information for vacant positions and can attract a substantial amount of online traffic. Many online intermediaries upkeep CV databases, which companies can access in search for a suitable candidates. A number of studied companies have reported that up to 70% of employee sourcing occurs through advertising on the internet-intermediaries' job portals. Some organisations have even automated the job posting procedure, where ready for submission job announcements are continuously fed onto the internet job databases.

Niche advertising of vacancies has also become an issue for some recruiters, increasingly placing job ads on various portals belonging to online communities of practice (COP) and professional networks. Another interesting social phenomenon, also of relevance to e-recruitment, is an increasing use of social and professional electronic networks like Facebook, LinkedIn and MySpace for job advertising and employer branding, though some of the interviewed recruiters refuse using these

channels as unethical practice, while others consider them legitimate communication channels.

4.2 The Framework of Virtual Organising of Recruitment

Preliminary analysis of the collected data allowed sketching overall elements of e-recruitment from the perspective of virtual organising. The results presented in Table 1 are a composite picture of elements of e-recruitment, which are not necessarily fully present in all researched organisations.

Table 1. Elements of virtual organising of recruitment.

Level	Elements		
	Organisational	Technological	Social-cognitive
<i>Employee</i>	Recruitment partner, manager, assistant.	Client software, PC, internet / intranet connection, email	Basic technology apprehension and computer literacy. Self moderation.
<i>Groups / Teams</i>	Recruitment group, part of HR department. Well established recruitment routines.	Groupware recruitment software, CV database, LAN, group servers.	Online cooperation, communication and interaction. Group moderation.
<i>Organisation</i>	Collaboration of HR, IT, communication departments and employer brand manager. Part of Talent Management System.	Corporate website, integration with e-recruitment system, mainframes and servers, connectivity with talent management system.	Various recruitment policies, e.g. Diversity and equal opportunity employer. Governance by institutionalised corporate ethics.
<i>External partners and customers</i>	Collaboration with online job databases, recruitment agencies, public unemployment agencies and trade unions. Employer branding.	Digital connectivity with partner organisations thorough standardised protocols (XML). Data interchange and sharing (Web 2.0).	Mutual interests. Trust, Confidentiality of data guarantee. Policy of corporate social responsibility.
<i>Society</i>	Communications through online communities, social networks (Facebook, LinkedIn, My Space) and virtual reality spaces (SecondLife).	Well-developed technological infrastructure, broadband connectivity and overall availability of World Wide Web.	Cultural norms and traditions, overall educational level and computer literacy of population. Institutionalised employment practices.

5 Conclusions and Implications

Since the presented study has not been fully completed yet, it is still a bit premature to expect "firm" conclusions, which can pass a stringent validity test. However, few early conclusions can be drawn which might initiate and facilitate a valuable discussion.

The conducted exploratory study has shown that e-recruitment as an organisational concept and social phenomenon is not limited to the internal boundaries of an organisation. It should not be perceived simply as some technological solution deployed in support of a recruitment function. Studying e-recruitment on organisational level requires a theoretical approach or framework taking into account the environment in which the organisation operates. E-recruitment related activities are directed to and performed with external partners and customers, as well as they are affected by a broader society in which the organisation operates.

While traditional recruitment may not require any particular technology, e-recruitment is reliant on a wide range of information and communication technologies and access to them by the general public. Viewing technology just as contingency will limit research to establishing economic rationality of automating recruitment tasks and changes in routines, while technology in this case plays a wider societal role, and may affect livelihoods of individuals and organisations.

The research has also confirmed that e-recruitment can be viewed and studied through the framework of virtual organising. The framework does not only allow identifying various elements of organising of e-recruitment, but may also help to establish how far organisations have progressed in deploying and organising their e-recruitment.

Recruiting with the help of electronic means does not alter, eliminate or replace any traditional phases of the recruitment cycle; it rather modernises and advances the whole process, bringing it to another level of organisational complexity. In other words: a recruitment process with e-recruitment gains an additional dimension, which is due to its direction towards external environment enhances the strategic significance of how well the function is performed.

Research in e-recruitment and a wider concept of e-HRM might also question whether the traditional classification of HRM types is applicable to e-HRM. Advances in e-HRM technologies and new organisational concepts, like talent management and employer branding may lead to a blurred distinction of the purpose of each HRM type. Advanced e-HRM solutions are already characterised by features and activities corresponding to all three e-HRM types, i.e. operational manifested in administering applications, relational in its supportive function for acquiring human resources, and transformational with its role in the process of HR development and employer-branding activities.

A better understanding of the organisational concept of e-recruitment might be achieved by studying how external environment and a society in general affect organisation of e-recruitment and its utilisation, and an institutional perspective can be potentially beneficial. Also more studies of how different elements of organising of e-recruitment add to efficiency and effectiveness of the recruitment process can shed light on which elements are more crucial than others.

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