

Exploring types, drivers and outcomes of social e-HRM

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Abstract

Purpose – This paper explores the use of social media (SM) in Human Resource Management (HRM). Building on the configurational approach, the study investigates the existence of different configurations of social e-HRM, their consequences for the organizations and their predictors.

Design/methodology/approach – This empirical study draws on a survey administered to HR directors of 176 companies operating in Italy. Two-step cluster analysis, test for variance and logistic regressions were employed for data analysis.

Findings – Three social e-HRM configurations emerged – non-use, relational use and extended relational use – which distinguish different goals for using SM in HRM. The three configurations lead to similar outcomes for organizations, even if SM users, in general, enjoy greater success than non-users. Certain structural, strategic and HRM factors are systematically and variously associated with each configuration.

Research limitations/implications – The study is based on cross-sectional research, and thus it is difficult to identify causal links between the variables. The study also relies on data collected in a specific national context, which limits the generalizability of the results.

Practical implications – The study suggests that different and equally effective social e-HRM configurations exist and that their presence is predicted by specific structural, strategic and HRM factors.

Originality/value – The study contributes to an emerging and still scarce literature on types, drivers and outcomes of SM use in HRM.

Keywords Social media, Human resource management, e-HRM, Digitization, Configurational approach

Paper type Research paper

1. Introduction

Over recent years, the use of information technologies (IT) in the field of human resource management (HRM) has spread among companies and attracted attention in the academic literature. The phenomenon is known as electronic-HRM (e-HRM) and concerns the implementation within organizations of HR strategies, policies and activities with the support and use of applications based on IT with the aim of improving organizational results (Ruel *et al.*, 2004; Boundarouk and Ruel, 2009).

While research on quantitative adoption of e-HRM is growing (e.g. Florkowski and Olivas-Luján, 2006; Strohmeier and Kabst, 2009; Panayotopoulou *et al.*, 2010), little is known about possible differences and patterns in e-HRM practices, their antecedents and the outcomes for organizations (Strohmeier and Kabst, 2014). From this perspective, more qualitative knowledge is needed to better understand what types of e-HRM currently exist, what factors drive different types of IT use in HRM and what consequences e-HRM has for organizations (Strohmeier and Kabst, 2014; Marler, 2009; Parry and Tyson, 2011). To this end, a configurational approach proves helpful by assuming e-HRM to be a combination of multiple dimensions rather than a function of a single dimension (Martin-Alcazar *et al.*, 2005). Building on the few previous studies (i.e. Strohmeier and Kabst, 2014; Ferrat *et al.*, 2005), the present paper explores the existence of different possibilities for using IT in HRM based on potential goals.



A widely recognized limitation of the e-HRM literature is that scholars in this field have tended to adopt a generic approach that considers IT as a whole but does not take into account the specific functionalities and varied benefits of IT applications in HRM. In this vein, more focalized research on specific IT tools is required to explore e-HRM configurations, their predictors and the outcomes for the organization (Strohmeier, 2007). The present study tries to fill this gap, by focusing on social media (SM), which belongs to the SMACIT technologies (Social, Mobile, Analytics, Cloud and Internet of Things) that are now leading the digital transformation of the HR departments (O'Reilly, 2007; Kaplan and Haenlein, 2010). Although existing research on social e-HRM has focused to some extent on social recruitment, a holistic approach that considers a more comprehensive adoption of Web 2.0 applications in HR departments is still lacking (i.e. Kluemper *et al.*, 2016; Thomas and Akdere, 2013).

Drawing on data from a survey conducted in Italy with a sample of private companies, the present study explores the types, drivers and consequences of SM use in HRM. More specifically, the present paper aims (1) to identify different types of social e-HRM configurations, (2) to explore the consequences of social e-HRM configurations for organizations and (3) to determine the factors that drive the different types of social e-HRM configuration.

The study contributes to existing research on e-HRM and provides new evidence on the relationship between SM and HRM that is yet to be fully explored (Roth *et al.*, 2016). It sheds light on different types of SM use in HRM on the basis of company objectives and their consequences for organizations. In addition, by including an analysis of the drivers of social e-HRM configurations, the present work explores issues that have only occasionally been addressed in the e-HRM literature (Strohmeier, 2007).

2. Research framework

2.1 Social e-HRM

SM are among the leading technologies associated with e-HRM due to the fast-growing trend of SM adoption by individuals and within organizations (Poba-Nzaou *et al.*, 2016). Kaplan and Haenlein (2010) define SM as “a group of Internet-based applications that operate on the foundations of Web 2.0 and that allow the creation and exchange of User Generated Content”. Although SM began as an Internet phenomenon, they have some features that distinguish them from traditional Web technologies. Indeed, SM have changed the nature of information flow both within organizations and in society more generally, thus determining the transition from a “static” Internet to a more dynamic space in which people can connect, create and consume contents (O'Reilly, 2007). Furthermore, SM should not be considered as a single application, but rather as sub-groups of technologies that can be distinguished according to their functionalities, including collaborative projects (e.g. Wikipedia, forums and blogs), content communities (e.g. YouTube or Flickr), social networking sites (e.g. Facebook, Twitter and LinkedIn) and virtual worlds (e.g. Second Life) (Kaplan and Haenlein, 2010).

SM are now widely used to support HR departments (Poba-Nzaou *et al.*, 2016). Table 1 reports a short description of the most used SM applications within HR functions.

Existing studies on the use of SM in HRM focus mainly, if not exclusively, on social recruitment (Brown and Vaughn, 2011; Weitzel *et al.*, 2009). In this field, scholars agree that SNSs help companies to generate referrals with respect to recruiting candidates (Smith and Kidder, 2010) and are the preferred way to acquire talent (Brotherton, 2012). This preference is largely due to the possibility of expanding the talent pool through online networks (Brotherton, 2012; Kluemper *et al.*, 2016) and the opportunity to reduce recruitment costs and shorten the overall hiring cycle (Cober *et al.*, 2000).

Recent scholars, however, have highlighted that SM can benefit HRM in a broader way. Andriole (2010) and Burrus (2010), for example, have stated that SM help companies to reduce

distances within the organization, shorten timescales, facilitate problem-solving, manage distributed knowledge, increase transparency in the relations between managers and employees, promote collaboration and encourage employee participation and innovative behaviours. In addition, [Murphy \(2010\)](#) has noted that SM can facilitate the HR department's fostering of employee engagement, improve and enhance business agility, minimize task duplication and gain sustainable competitive advantage in numerous human resource management functions. Finally, [Kluemper et al. \(2016\)](#) have suggested that SM should no longer be confined to recruitment but should be used to support different HR functions, including on-boarding, training and development, performance management, knowledge management and internal communication.

The existing empirical studies provide support for a wider use of SM in HRM. [Gibbs et al. \(2015\)](#), for example, found that hotels in North America used SM for managing internal communication and employer branding, even more often than for recruiting and selecting

Social media	Short description	Applications in HR
Social Network Sites (SNSs)	Platforms where individuals can automatically create an account, acquire friends, and share personal and professional information (e.g. LinkedIn, Facebook and Twitter)	Recruit and select potential employees; diffuse the employer branding strategy
Content communities	Web platforms based on social logic which allow to share and view videos and other contents on Internet (e.g. Youtube, Flickr)	Diffuse the employer branding strategy and corporate culture; support the training activities (especially e-learning) and internal communication with employees
Enterprises Social Networks (ESNs)	Internal Social Network (e.g. Yammer or Jive) that allow employees to communicate with colleagues effectively and efficiently in terms of time saving and break down the formalisms which are typical of traditional collaboration	Virtually dialogue with colleagues; facilitate teamwork by creating workspaces and virtual communities aimed at solving problems and/or carry out specific projects
Instant messaging	Communication system which allows its users to exchange short messages in real-time through Internet or local networks (e.g. Skype, WhatsApp, etc.)	Chat via voice with VoIP technologies and/or make video conferences; store data and exchange files
Collaborative intranet	Institutional intranet portal which incorporates interaction and network characteristics; they allow members of an organization to send communications and ask for clarifications, details, insights in an extremely rapid and effective manner	Disseminate, exchange and share formal and informal knowledge within the organization
Forums	Discussion sections within an IT platform which can be used to put individuals in communication so that they can find and exchange information on specific topics	Develop virtual communities where regular users with common interests can contribute; connect employees and allow them to find information
Blogs	Website where content is displayed in chronological order and managed by one or more bloggers who publish multimedia content, in text or post form	Facilitate communication and teamwork within the organization; support training activities and performance evaluations
Wikies	Collection of hypertext documents that are developed in collaboration by all those who have access to it (user-generated content)	Share, exchange, store and optimize information in a collaborative way within an organization

Table 1.
The main SM
applications for HRM

Source(s): Authors' own elaboration on [Cavenago and Martini \(2014\)](#)

candidates. [Thomas and Akdere \(2013\)](#), highlighted that SM – such as Wikis, internal social networks and blogs – are used as collaborative tools to support workplace learning, training and knowledge management strategies. [Arjomandy \(2016\)](#), revealed that traditional and ad hoc SM were adopted by companies of different sizes to support a variety of strategic HR functions, including recruitment, internal communication, training, on-boarding, team-building and engagement.

In light of the growing importance of SM in HRM, [Arjomandy \(2016\)](#) defines social e-HRM as “the planning and implementation of Internet-based Web 2.0 applications that allow the creation and exchange of user generated contents among two or more individual or collective actors, as they engage in HR-related activities” ([Arjomandy, 2016](#)). According to this definition, social e-HRM offers a new perspective on e-HRM systems as initiatives aimed at managing human resource by incorporating the synergies associated with ongoing, real-time and social interaction. Although many scholars agree that SM can support different strategic HR functions, there is a lack of research that adopts a systemic and holistic approach to the investigation of SM use in HRM. The present study tries to fill this gap by considering different ways to use SM in HRM and by distinguishing these ways on the basis of the HR activities supported and the HR goals pursued by the organizations through these technologies.

2.2 Social e-HRM configurations

The configurational approach constitutes a classic perspective for researching organizational differences with the aim of developing classifications of organizations based on a set of factors and relating them to important organizational outcomes (e.g. [Meyer et al., 1993](#); [Short et al., 2008](#)). The general assumption of configuration theory is that a company’s strategy or archetype can be described as a combination of multiple dimensions rather than as a function of a single dimension. More specifically, configuration theory states that there is a certain number of configurations for every organizational phenomenon, and that these can be adduced from the theory or even derived empirically. The underlying idea is that configurations of organizational attributes generally have the property of “fit”, such that greater fit leads to more effective outcomes ([Ferrat et al., 2005](#)).

The configurational approach has been widely adopted in general management research (see, for example, the review by [Short et al., 2008](#)) and successfully employed in HRM (e.g. [Delery and Doty, 1996](#); [Lepak and Snell, 2002](#); [Verburg et al., 2007](#)). More specifically, when the configurational approach was adopted for exploring IT use in HRM, it allowed scholars to identify different e-HRM configurations and to explain their existence and success in terms of certain contextual conditions ([Strohmeier and Kabst, 2014](#); [Ferrat et al., 2005](#)).

The configurational approach requires building on a theoretical taxonomy. In this perspective, a review of existent literature suggests that e-HRM systems can be categorized according to e-HRM objectives ([Strohmeier and Kabst, 2014](#); [Marler, 2009](#); [Parry and Tyson, 2011](#); [Ruel et al., 2004](#); [Bissola and Imperatori, 2014](#)). This classification is built on a framework developed by [Lepak and Snell \(1998\)](#) and sets out three main e-HRM types: operational e-HRM, relational e-HRM and transformational e-HRM.

The operational e-HRM configuration focuses on the administrative area of HRM and is found in organizations that use IT applications mainly to improve HR department efficiency ([Parry, 2011](#)). Operational e-HRM typically includes activities such as e-personnel record-keeping and administration, e-payroll, e-time management and e-access control ([Ruel et al., 2004](#)). Due to the nature of SM, their use for supporting HRM operational activities has been discussed rarely. However, SM applications, such as collaborative intranet, discussion forums and instant messaging, could support daily personnel administrative functions if HR staff used them for storing, sharing and accessing information which are useful for performing their job. Previous studies also suggest that employers can use SNSs (e.g. Facebook, Twitter) for monitoring employee on-the-job and off-the-job activities and to justify any disciplinary actions

(Lam, 2016; Opgenhaffen and Claeys, 2017). Furthermore, SM, such as instant messaging, collaborative intranet and ESNs, shows to be particularly effective in supporting HR operational activities when the organization has to deal with remote workers and virtual teams (Tijunaitis *et al.*, 2019).

Relational e-HRM, on the other hand, is associated with organizations that aim to manage and sustain relationships with employees by empowering them at work (Parry and Tyson, 2011). Relational e-HRM thus includes e-manager support systems and e-employee support systems (Strohmeier and Kabst, 2014). This is the area where SM is expected to contribute the most. Indeed, previous studies agree that SM, such as instant messaging, collaborative intranet, forums, blogs and wikies – are largely used to support relational HR functions, such as internal communications (Reitz, 2012; Vuori, 2012), team building (Arjomandy, 2016), information management, knowledge sharing and collaboration (Holtzblatt *et al.*, 2013; Panahi *et al.*, 2012).

Finally, transformational e-HRM aims to improve the strategic orientation of HRM by transforming the HR function (Parry and Tyson, 2011), and thus includes e-recruitment, e-compensation, e-training and development and e-performance management. The use of SNSs as an effective tool for recruitment is widely recognized (e.g. Zide *et al.*, 2014). However, SM does not only support the recruiting and selection processes but SNSs and other Web 2.0 applications also contribute to many other transformational activities. The review from Azeem and Yasmin (2016) shows that SM can support different transformational HR functions, including employees orientation, training, career development, performance management and rewards. For example, SNSs (e.g. Youtube) instant messaging, corporate wikies and blogs are increasingly used by large companies to provide virtual and online training courses. Moreover, performance management can benefit from SM applications as the latter allow employers to conduct ongoing performance evaluations, provide and receive continuous feedbacks and apply 360 degree appraisal method. Finally, SNSs, instant messaging, collaborative intranet, forums, blogs and wikies can also improve the organizational reward system by allowing for a better communication with stakeholders both within and outside the organization (Azeem and Yasmin, 2016).

Although most researchers have conceptualized operational, relational and transformational as ideal e-HRM configurations, other configurations have emerged reflecting a combination of different objectives for companies in their use of IT in HRM (Ruel *et al.*, 2004). Strohmeier and Kabst (2014), for example, highlight that, beyond the three aforementioned configurations, a further five possible e-HRM typologies are possible when companies mix two or more objectives. These additional e-HRM configurations include extended operational use, which combines relational and operational e-HRM, extended relational use, which mixes transformational and relational e-HRM, non-relational use, which includes transformational and operational e-HRM, and power use, which covers both transformational, relational and operational e-HRM. The existing empirical evidence confirms that e-HRM configurations can be combined in practice, rather than being mutually exclusive, as companies can simultaneously pursue different objectives for using IT in HRM (Strohmeier and Kabst, 2014).

To the authors' knowledge, no existing studies have explored different types of SM use in HRM by building on the categorization of e-HRM objectives. However, even if the classification fits this domain, one may expect some deviations from e-HRM ideal types because of the specific functionalities of SM. In particular, SM are used as front-end technologies in e-HRM (Stromaier, 2007), where the primary task is to connect different actors within and outside the organization (Panayotopoulou *et al.*, 2010). Accordingly, SM could be more effectively used to support relational and transformational HR activities (e.g. recruitment, training, communication and knowledge management) rather than for operational purposes (Kluemper *et al.*, 2016).

Building on the above discussion, the first research question of the present study is as follows:

RQ1. What types of social e-HRM configurations arise from e-HRM objectives?

2.3 Consequences and drivers of social e-HRM

Previous research shows that e-HRM allows organizations to achieve better results by increasing HRM efficiency, improving HR service quality and strengthening the capability of HR departments in supporting the overall business strategy (Bondarouk *et al.*, 2017; Obeidat, 2016; Strohmeier, 2009). The positive impact of e-HRM on organizations has been “integrated” into the concept of HRM effectiveness, which is interpreted as the capacity of HRM to contribute to a firm’s performance. Accordingly, empirical research has often considered HRM effectiveness as the main outcome of e-HRM, thereby providing general support for the existence of a positive effect of e-HRM at both policy and practice levels (Ruel *et al.*, 2007; Reddington *et al.*, 2015; Obeidat, 2016).

The use of SM in the workplace can benefit employers in different ways. SNSs help organizations to attract, recruit and retain young talented candidates (Naim and Lenka, 2018), while corporate wikis, blogs and other Web 2.0 applications allow managers to better interact with their employees, motivate workers and empower them in taking work-related decisions (Azeem and Yasmin, 2016). Then, by using SM employers increase their capability to attract and retain valuable human capital, improve employee performance (Collins and Smith, 2006), and sustain trust, organizational climate and innovativeness (Muninger *et al.*, 2019; Roblek *et al.*, 2013). As a result, SM can lead to exceptional organizational performance and also lays the foundations for the organization to achieve a competitive advantage and reach higher financial performance over-time (Collins and Clark, 2003).

According to configuration theory, to be effective e-HRM practices should fit with each other (horizontal fit) (Ferrati *et al.*, 2005; Strohmeier and Kabst, 2014). Thus, the present study focuses on the relationship between social e-HRM configurations and key outcomes for the organization by investigating whether different configurations of social e-HRM lead to similar (or different) results in terms of HRM effectiveness.

The second research question of the present study is therefore as follows:

RQ2. What are the outcomes for organizations of each social e-HRM configuration?

Although they have only occasionally addressed the issue, previous e-HRM studies suggest that different factors can further or hinder a company adoption of e-HRM and types of IT use in HRM (Bondarouk *et al.*, 2017; Burbach and Royle, 2014; Panayotopoulou *et al.*, 2010; Strohmeier, 2007). According to previous literature, potential predictors of social e-HRM configurations can be distinguished in structural, strategic and HRM factors.

Structural factors include a company’s sector and size. Previous studies have shown that the economic sector of a company can influence the extent of its social e-HRM adoption because of mimetic isomorphic pressures (Burbach and Royle, 2014; Panayotopoulou *et al.*, 2007, 2010; Strohmeier and Kabst, 2009). Accordingly, the greater the number of adopters in an industry, the greater the pressure towards innovation adoption to gain organizational legitimacy and ensure survival. Moreover, SM demonstrate to be particularly effective for recruiting high skilled candidates and promote knowledge exchange within the organization. As consequence, SM could be preferred by organizations which belong to human capital and knowledge-based industries (Roblek *et al.*, 2013). Previous research also suggests that larger companies make greater use of IT in HRM (Strohmeier and Kabst, 2009): such companies are more likely to reach a “critical mass” demanding enhanced delivery of HRM services and therefore benefit more than small and medium organizations from the adoption of e-HRM (Panayotopoulou *et al.*, 2010). In addition, as internal communication and information

management are particularly complex process within large organizations, they could benefit more than SMEs from the adoption of Web 2.0 applications for relational objectives (Huang *et al.*, 2013). Other potential predictors of SM use in HRM concern a company's strategic orientation at the business level (Schalk *et al.*, 2013). From this perspective, companies that are more oriented towards efficiency and cost reduction are expected to make operational use of SM in the HR area, while companies that pursue innovation strategies for their products and services may opt for a relational and/or transformational use of the new technologies (Marler, 2009). Finally, a company's decisions on whether to use SM and how to use these technologies in HRM depend on the availability of specialized HR and IT skills. The lack of awareness of SM benefits and dedicated technical staff have emerged as the main barriers to an effective adoption of SM within the organizations (Al-Busaidi *et al.*, 2017). Furthermore, previous studies have shown that the presence of a structured HR department with dedicated and skilled HR professionals can facilitate the adoption of IT and usually leads to the long-term success of e-HRM (Parry and Tyson, 2011).

Based on the above discussion on the predictors of IT use in HRM, the third research question is as follows:

- RQ3. What are the structural, strategic and HRM factors that drive the emergence of different social e-HRM configurations?

3. Method

3.1 Data collection and sample

The study draws on research that was conducted in 2014 to explore the use of SM in HR departments in Italy. The reference population was identified among the client companies of one of the largest temporary work agencies (TWAs) in Italy, including 930 companies that had signed a business contract with the TWA in 2013.

An online survey was built to explore the spread and scope of SM use in HR, the advantages and disadvantages of SM for HRM, and the drivers and barriers to their diffusion within the HR departments. The survey also included items to explore the companies' strategic and organizational characteristics (e.g. sector, number of employees, presence or absence of an HR department and type of competitive strategy) and their organizational and financial performance (e.g. perceived financial and organizational performance).

Using the CATI method, an online survey was administered in June 2014 to the human resource directors or, where the directors were not present, to the persons in charge of HRM in the company. A total of 229 interviews were carried out, with a response rate of 30%. Companies with fewer than 15 employees and those belonging to the public and social services were excluded from the analysis, as their targets and behaviours were not completely comparable to the rest of the sample.

The final sample included 176 companies representative of the reference population in terms of organizational characteristics. Thus, most of the companies (60.3%) belonged to the industrial sector, 25.4% to the services sector, 9.5% to the commercial sector and 4.8% to the construction sector. In terms of size, 60.4% were small enterprises (with fewer than 50 employees), while 26% had between 50 and 249 employees and the rest (13.6%) were large enterprises (with more than 249 employees).

3.2 Measures

An elaboration of the different variables used in the analyses is given here.

Clustering variables. Building on previous literature (Strohmeier and Kabst, 2014), a set of binary categorical variables was employed that allowed the researchers to identify whether

SM was being used to support a specific HR function. Eight functions were considered; for each function, respondents were asked if one or more SM (including internal and external social networks, collaborative Internet, instant messaging, blogs and forums) were currently used as supporting tools. As indicators of operational e-HRM, the adoption of SM within both the administrative and payroll activities was measured. As indicators of relational e-HRM, the adoption of SM within the functions of internal communication and engagement, and knowledge management and collaboration were considered. Finally, as indicators of transformational e-HRM, the use of SM in recruitment, training and development, performance management and job evaluation were employed, as these are typically considered to be a transformational type of e-HRM.

Drivers. A set of categorical and numerical variables was employed as potential predictors of SM use in HRM. Structural factors included sector (categorical variable) and organizational size (categorical variable). Strategic factors included business strategy. To distinguish between different business strategies, two measures of innovation and price-oriented strategy were derived from [Nesheim et al. \(2005\)](#). These measures were based on responses to the statements scored on a Likert scale from 1 = “completely disagree” to 5 = “completely agree”. The item for innovation-oriented strategy was “In the markets where we operate, the ability to innovate and develop new products are the most important source of competitive advantage”; the item for price-oriented strategy was “In the markets where we operate, price is the most important source of competitive advantage”. Finally, HRM factors were the presence of a skilled and dedicated structured department for managing and developing human resource (binary variable), and the extent of HR outsourcing. The extent of HR outsourcing, in particular, was included, as this may be considered an alternative strategy for companies to equip themselves with specialized HRM skills. HR outsourcing was measured on a scale ranging from zero to eight taking into account the number of HR functions that the company had acquired from external providers (e.g. administration, recruitment, training and performance assessment).

Economic and organizational performance. The outcomes of social e-HRM in terms of HRM effectiveness were assessed using financial and organizational measures ([Huselid, 1995](#)). Two different scales were used, one from [Delaney and Huselid \(1996\)](#) and the other from [Perry-Smith and Blum \(2000\)](#). The organizational performance scale was composed of six items concerning the respondent’s perceptions of the quality of products and services, innovation capacity, customer satisfaction, talent attraction, talent retention and internal climate (Cronbach’s alpha = 71.6). The economic performance scale included four items that measured the respondent’s perceptions of sales trends, turnover, profit and market share (Cronbach’s alpha = 89.0). Each item was scored on a five-point Likert scale, where 1 = “in the last three years, the performance of my company has been much lower than that of our competitors”, and 5 = “in the last three years, the performance of my company has been much higher than that of our competitors”.

3.3 Analysis

The data analysis followed a three-step approach. In the first step, a cluster analysis was conducted to explore whether the adoption of SM in HRM led to alternative configurations. Cluster analysis is an explorative multivariate technique that has been widely used in both strategic management research ([Ketchen and Schook, 1996](#)) and in the HRM literature (e.g. [Ferrat et al., 2005](#); [Strohmeier and Kabst, 2014](#)). It allows the identification of aggregations of entities that naturally characterize the underlying data structure ([Everitt, 1980](#)). More specifically, a two-step cluster analysis was selected for this study, as it is appropriate for categorical variables and adequate for relatively large samples ([Garson 2009](#)).

In the second step, a test for variance was performed to evaluate the outcomes of the emerging social e-HRM configurations on the economic and organizational performance of the organizations. More specifically, a one-way ANOVA was implemented, as it is the classic method of configuration research when the dependent variables are ordinal (e.g. [Short et al., 2008](#)).

In the third step, different logistic regression analyses were implemented in line with the recommendations of [Peng et al. \(2002\)](#), to explore the likelihood of the company belonging to one social e-HRM configuration or another, and its relationships with structural, strategic and HRM characteristics. In particular, logistic regression was preferred to multinomial regression, as the present study aimed to identify the predictors for each social e-HRM configuration. One logistic regression was performed on each social e-HRM configuration, taking the other configurations as the reference category.

4. Results

4.1 Social e-HRM configurations

Two-step cluster analysis was conducted using IBM SPSS 25, with the eight HRM functions as the clustering variables (for an overview of the methods, see [Norusis, 2008](#)). The method employs a development of [Banfield and Raftery's \(1993\)](#) model-based distance measure and a two-step cluster approach similar to that of BIRCH, developed by [Zhang et al. \(1996\)](#).

The two-step cluster analysis pointed towards a three-cluster solution, which showed a reasonably large ratio of BIC changes (= 0.561) and a large ratio of distance measures (= 1.720). In addition, the value of the silhouette coefficient for the three-cluster solutions was equal to 0.7, suggesting a good fit of the model and the validity of the within- and between-cluster distances. Furthermore, Pearson's chi-squared test for the categorical variables showed that the three clusters varied significantly across each segmentation variable (see [Table 2](#)).

To overcome the problem of data order in the data set, the database was divided into four random and equal parts, and the same statistical procedure was carried out for each part

		Non-user (<i>n</i> = 55, 31.2%)	Relational user (<i>n</i> = 91, 51.7%)	Extended relational user (<i>n</i> = 30, 17.0%)	χ^2
Operational	Administration	5.5% (<i>n</i> = 3)	25.3% (<i>n</i> = 23)	50.0% (<i>n</i> = 15)	0.000***
	Payroll and benefit	0.0% (<i>n</i> = 0)	8.8% (<i>n</i> = 8)	23.3% (<i>n</i> = 7)	0.001**
Relational	Internal communication and engagement	0.0% (<i>n</i> = 0)	87.9% (<i>n</i> = 80)	100.0% (<i>n</i> = 30)	0.000***
	Knowledge management and collaboration	5.5% (<i>n</i> = 3)	61.5% (<i>n</i> = 56)	93.3% (<i>n</i> = 28)	0.000***
Transformational	Recruitment	36.4% (<i>n</i> = 20)	72.5% (<i>n</i> = 66)	63.3% (<i>n</i> = 19)	0.000***
	Training and development	10.9% (<i>n</i> = 6)	39.6% (<i>n</i> = 36)	70.0% (<i>n</i> = 21)	0.000***
	Performance management	1.8% (<i>n</i> = 1)	19.8% (<i>n</i> = 18)	56.7% (<i>n</i> = 17)	0.000***
	Skills and job evaluation	7.3% (<i>n</i> = 4)	0.0% (<i>n</i> = 0)	100.0% (<i>n</i> = 30)	0.000***

Table 2.
Social e-HRM
configurations (two-
step clustering)

Note(s). ****p* < 0.001; ***p* < 0.05; **p* < 0.10

(Norusis, 2008). As result, a three-cluster solution was produced three times out of four, while on one occasion a four-cluster solution emerged. The three-cluster solutions were similar in terms of the number and characteristics of the clusters, silhouette measures of cohesion, and separation and importance of predictors. The four-cluster solution suggested that one of the three clusters could be split into two new clusters. Nevertheless, in addition to its better correspondence with the statistical criteria, the three-cluster solution fitted better than the four-cluster solution in terms of the qualitative criteria of size and the interpretability of the final configurations (Ketchen and School, 1996).

Table 1 shows the results of the two-step cluster analysis. The percentage of companies that adopted SM in each HR function is reported, with the number of companies in brackets. Interestingly, the three clusters found are very close to the ideal types suggested in the literature, i.e. non-user, relational user and extended transformational user (Strohmeier and Kabst, 2014). The respective percentages do not amount to 100% of cluster members because of the presence of deviating cluster members. Nevertheless, the clusters found are sufficiently close to the three ideal types for the same names to be used.

Non-users mainly did not adopt SM in HRM and did not pursue operational, relational or transformational objectives. Interestingly, within this cluster only 5.5% of companies used SM within the HR administrative functions, and none did so in support of the compensation and benefit function. Similar rates of use were found for internal communication and knowledge management functions (0 and 5.5%, respectively). Rates were also low for transformational functions, where only 10.9% adopted SM in training and development, 7.3% in skills and job evaluation and 1.8% in performance management.

Relational users adopted SM mainly to inform and connect employees and line managers, to favour knowledge transfer, and to improve engagement and collaboration within the organization. Most of the companies in this cluster adopted SM to support internal communication and knowledge management (87.9 and 61.5%, respectively). However, only a few companies in this group integrated SM within operational functions (25.3% in administration and 8.8% in payroll and benefits) or within transformative functions (39.6% used SM in training and development, 19.8% in performance management, and none in skills and job evaluation).

Extended relational users included organizations that combined both relational and transformational objectives for using SM. Almost all the companies in this group used SM in relational functions such as internal communication and knowledge management and collaboration. Furthermore, extended relational users used SM for transformational objectives. More specifically, 70% used SM to support training and development, 56.7% for performance management, and 100% for skills and job evaluation. Finally, a significant percentage of companies in this group used SM to support recruitment (63.3%).

It is important to note that the non-user and relational user configurations significantly deviated from the ideal type, since both involved social recruitment, which is usually regarded as a transformational function (36.4 and 72%, respectively). The extended relational user configuration also deviated from the ideal type, since approximately 50% claimed to use SM to support administrative functions.

4.2 Consequences of social e-HRM configurations

Table 3 reports the results of variance analysis between the three clusters regarding financial and organizational performance. According to the results, all three social e-HRM configurations allowed companies to achieve relatively high outcomes. However, extended relational users and relational users had somewhat better financial outcomes than non-users ($p < 0.05$). From this, it seems that SM users, in general, had greater success, but it should be emphasized that even the non-user configuration had remarkably high performance.

4.3 Drivers of social e-HRM configurations

The final aim of the study was to analyse how the three clusters related to a set of variables that are considered potential predictors of e-HRM. Table 4 shows the results of three logistic regression models performed separately for each social e-HRM configuration. The table reports, for each predictor, the estimated coefficient (B), the standard error (SE) and the exponential odds ratio (OR).

Overall, the structural, strategic and HRM variables explained 17.5%, 14.4 and 20.6%, respectively, of the overall variance in the likelihood of being non-users (Model 1), relational users (Model 2) and extended relational users (Model 3). The likelihood ratios were also statistically significant, suggesting that the three models were all more effective than the null models. Finally, the concordant associations of predicted probabilities and the observed responses were relatively high (70.9, 62.3 and 82.9% for Models 1, 2 and 3, respectively) indicating goodness-of-fit.

The results of Model 1 show that the economic sector and business strategy were both significantly associated with the non-user configuration. In particular, belonging to the industry, construction or commerce sectors were all significantly and positively associated with the likelihood of being a non-user, when compared with the service sector (respectively, $B = 1.167$, $OR = 3.213$ and $p < 0.05$, $B = 1.584$, $OR = 4.873$ and $p < 0.10$, $B = 1.175$, $OR = 3.240$ and $p < 0.10$). In addition, pursuing an innovation-oriented strategy at business level was negatively associated with the non-user configuration ($B = -0.348$, $OR = 0.706$ and $p < 0.05$).

The results of Model 2 show that sector, company size and HR outsourcing were significant predictors of the relational user configuration. More specifically, belonging to the construction sector was negatively associated with the relational user configuration ($B = -1.647$, $OR = 0.193$, $p < 0.10$), as was being a company with fewer than 50 employees ($B = -1.104$, $OR = 0.331$, $p < 0.05$). In addition, a greater HR outsourcing process was negatively associated with the relational user configuration, and the coefficient was statistically significant at 5%.

Finally, the results of Model 3 show that the probability of being an extended relational user depended on sector, business strategy and HR outsourcing. In particular, the industry sector was negatively and significantly associated with the extended relational configuration ($B = -1.082$, $OR = 0.125$, $p < 0.05$), while the degree of HR outsourcing ($B = 3.842$, $OR = 46.613$, $p < 0.001$) and pursuit of an innovation-oriented strategy ($B = 0.595$, $OR = 1.814$, $p < 0.05$) were both positively associated with this configuration.

	Non-user	Relational user	Extended relational user	χ^2 1	χ^2 2	χ^2 3	χ^2 4
<i>Outcome</i>							
Organizational performance	3.68	3.77	3.90	0.173	1.000	0.186	0.651
Financial performance	3.16	3.52	3.61	0.002**	0.004**	0.009**	1.000

Note(s): χ^2 1 Difference between all bundles (chi-square test or Kruskal–Wallis)

χ^2 2 Difference between clusters 1 and 2

χ^2 3 Difference between clusters 1 and 3

χ^2 4 Difference between clusters 2 and 3

*** $p < 001$; ** $p < 0.05$; * $p < 0.10$

Table 3. Outcomes of social e-HRM

	Model 1 Non-users			Model 2 Relational users			Model 3 Extended relational users		
	β	SE	OR	β	SE	OR	β	SE	OR
Constant	-1.006	1.081	0.366	1.639*	0.979	5.149	-5.265***	1.604	0.005
<i>Sector</i>									
Industry	1.167**	0.509	3.213	-0.289	0.399	0.749	-1.082**	0.511	0.125
Construction	1.584*	0.857	4.873	-1.647*	0.899	0.193	0.227	0.877	0.225
Commerce (base = Service)	1.175*	0.701	3.240	-0.309	0.614	0.734	-1.288	0.968	0.041
<i>Size</i>									
15-49 employees	0.972	0.675	2.643	-1.104**	0.572	0.331	0.432	0.752	1.540
50-249 employees (base \geq 250 employees)	0.064	0.733	1.066	-0.23	0.585	0.884	-0.006	0.757	0.994
<i>Business strategy</i>									
Price-oriented strategy	0.037	0.132	1.038	-0.037	0.120	0.963	-0.056	0.167	0.946
Innovation- oriented strategy	-0.348**	0.166	0.706	0.080	0.157	1.084	0.595**	0.313	1.814
<i>HRM</i>									
HR department	-0.264	0.411	0.768	-0.290	0.388	0.748	0.838	0.527	2.312
HR outsourcing -2LL	-0.044	0.989	0.957	-2.075**	0.960	0.126	3.842***	1.317	46.613
	194.631			222.332			134.352		
	$\chi^2 = 23.239$; df = 9; $p = 0.006$			$\chi^2 = 19.989$; df = 9; $p = 0.018$			$\chi^2 = 22.807$; df = 9; $p = 0.007$		
<i>Nagelkerke R²</i>	17.5%			14.4%			20.6%		
<i>Hosmer- Lemeshow test</i>	$p = 0.327$			$p = 0.573$			$p = 0.542$		
<i>Classification accuracy</i>	70.9%			62.3%			82.9%		
Note(s): *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$									

Table 4.
Results of the logistic
regression analysis

5. Discussion

The aim of the present study was to identify different social e-HRM configurations based on e-HRM objectives (RQ1), to explore their consequences for the organizations (RQ2) and to determine possible predictors of social e-HRM configurations (RQ3). The results of the analysis are discussed here, providing answers to the three research questions and deriving theoretical and practical implications.

First, the study shows the existence of different types of SM use in HRM. More specifically, three social e-HRM configurations can be distinguished on the basis of the objectives pursued by the companies when using SM. The first configuration, non-users, comprises companies that did not generally use SM in their HR department. This cluster counts about one-third of the surveyed organization the most of which belongs to the construction, commerce and industry sectors. Their decision not to bring any digital transformation into the HR functions seems to be coherent with their strategy at the business level, that indeed does not include any orientation towards innovation. The other two configurations are relational users and extended relational users. The former configuration includes companies that adopted SM only for relational purposes and to support internal communication, knowledge management and collaboration processes. The relational users is the most numerous cluster (51.7% of the companies) and is largely composed by medium to large organizations. After all, these are the organizations that can benefit the most of the relational advantages of SM, such as information management and knowledge exchange. Companies within this cluster are also

structured in such a way that allow them to internalize the most of the HR functions (no HR outsourcing). The latter configuration includes companies that used SM to pursue relational and transformational goals, thus supporting also recruitment, training and development, performance management, and skills and job evaluation. These are companies that fully grasp the strategic value of SM for the management of human resources. Most of the companies within this cluster belongs to the service sector and relies heavily on external providers for the management of HR processes. Interestingly, the digitization of the HR functions realized by these organizations is accompanied by a business strategy which is characterised by a strong orientation towards innovation.

Remarkably, the three social e-HRM configurations are close to the eight ideal types derived from the taxonomy based on e-HRM objectives (Lepak and Snell, 1998; Strohmeier and Kabst, 2014). From this perspective, it is clear that the classification that has been widely adopted in the e-HRM literature is also of value for exploring different ways to use SM in HRM. Nevertheless, the three social e-HRM configurations presented here deviate slightly from those in the previous empirical literature. Social recruitment, for example, occurs as a natural application of SM in the HR function, with most companies using SM to support their recruitment activities regardless of which configuration they belong to. Besides this, social e-HRM play a more strategic role within the HR department compared to IT in general. SM were little used for operational objectives, and relatively few companies had implemented Web 2.0 applications in administration and payroll functions; the adoption of SM was mainly (if not exclusively) intended to support transformational and/or relational HR functions. These results contrast with the previous e-HRM literature, which emphasizes that operational goals often prevail and represent a precondition for companies to make a more strategic use of IT in HRM (Bondarouk and Ruel, 2013; Strohmeier and Kabst, 2014). Instead, the present work suggests that SM are used mainly for the pursuit of relational objectives, and this confirms the hypothesis that SM can be particularly beneficial for promoting employee engagement within organizations (Arjomandy, 2016). Furthermore, the results reveal that SM are overcoming their relational boundaries within HR departments and now support different transformational functions, including but not limited to social recruitment, which can help companies to achieve their strategic objectives.

Second, and in line with the configurational assumptions, all three social e-HRM configurations led to similar outcomes for the organizations in terms of organizational and financial performance, even if SM users, in general, seemed to have greater success. As a consequence, this study rejects the hypothesis of an existing “best practice” concerning the use of SM in HRM, and even the assumption that high use of SM can in itself generate positive results for companies. In fact, the study shows that the maximum SM support in an HR department is not always desirable and that the effectiveness of SM in HR depends largely on the consistency of the goals pursued by the companies in using (or not using) these technologies.

The study also sheds light on factors that influence the choice to use or not use SM and how to use them within the HR departments, by distinguishing between structural, strategic and HRM dimensions. In terms of structural factors, the sector and size of a company play a significant role. Companies in the industry, construction and commerce sectors were less likely to use SM in HRM than companies in the service sector. In addition, the results show that companies in the construction sector were less likely to use SM for relational purposes, while those within industry were less likely to be extended relational users. This evidence firstly suggests that imitation pressures among potential competitors in the same sector intervene and influence the overall degree of innovation within HR departments (Burbach and Royle, 2014; Panayotopoulou *et al.*, 2010; Strohmeier and Kabst, 2009). Moreover, as both relational and extended relational users largely belong to the service sector, the results of the study may prove that the use SM in HRM particularly benefit knowledge-based

organizations (Roblek *et al.*, 2013). Smaller organizations are less likely to use SM for relational purposes, but they are not deprived of the opportunity to make extensive and strategic use of these technologies; larger companies, which are usually characterized by vertical structures and hierarchy, may benefit from using SM to facilitate internal communication, collaboration and knowledge exchange (Kluemper *et al.*, 2016). Company size did not affect the potential advantages derived from the use of SM within transformational functions, such as recruitment, training, performance management and skills assessment.

Another significant predictor of SM use in HRM is the strategy pursued by the company at business level. More specifically, a strategic orientation towards innovation significantly reduced the chances of a company not using SM, while it significantly increased the likelihood of extended relational use of these technologies. These findings indicate that implementing Web 2.0 applications within strategic HR functions can drive and sustain the overall innovative capacity of a company in terms of product, services and processes (e.g. Antikainen *et al.*, 2010; Ramaswamy, 2009).

Finally, the study identifies HR outsourcing as a potential predictor of e-HRM. According to the results of the empirical analysis, a greater degree of HR outsourcing was negatively associated with purely relational use of SM but positively associated with extended relational use. This result can be explained by the fact that through HR outsourcing, companies may have the chance to focus on their core and strategic activities. As a consequence, HR business process outsourcing may favour improvement and innovation initiatives within the HR function (Conklin, 2005). In addition, HR outsourcing contributes to making organizations more “permeable”. By partnering with specialists outside the firm, HR departments may be enabled to innovate themselves, including by integrating SM in more strategic HR processes (Lepak and Snell, 1998).

6. Conclusion and implications

This study has explored types, outcomes and drivers of social e-HRM. The results of the analysis suggest a number of significant considerations from a theoretical and a managerial point of view.

From a theoretical perspective, the study highlights the importance of distinguishing between different IT applications when studying e-HRM. Indeed, given their specific functionalities and technical features, each type of technology, as for SM, could be adopted and implemented within HR departments with different scopes and different aims. From this point of view, SM applications are particularly suitable to support relational HRM objectives and benefit organizational processes like internal communication, collaboration and personnel engagement. However, even due to the variety of SM applications and their specific functionalities, these tools can also support the management of operational and transformational HR functions, including personnel administration, training, performance management and skill assessment. From this point of view, it is useful to carry out qualitative studies, which would allow to shed light on the specific SM applications adopted by companies and their benefits for the management of the various HR processes (Azeem and Yasmin, 2016).

The study also suggests that configurational theory is a valid approach on which to base research exploring different types of use of SM in HRM and studying their consequences for the organizations. As in the case of the present study, this approach allows the identification of different possible configurations, each characterized by certain internal fit and alignment in terms, for example, of the HR processes supported. In this regard, while previous e-HRM studies based on configurational approach agree that operational use of IT is a precondition for a more strategic use of IT by organizations (Strohmeier and Kabst, 2014), in the case of

SM, this role seems to be played by social recruitment and relational activities. Accordingly, only after having experienced the advantages deriving from the use of the SM in these areas, companies may decide to make greater use of these tools by carrying out a digitalization of transformational HR processes.

Moreover, and in line with the configurational assumptions, the study reveals that the outcomes of SM for the organizations depended largely on consistency and alignment between the goals pursued by the companies through IT adoption. From this point of view, the configurational approach is relevant, as it shifts the attention of scholars from the concept of “best practices” to that of “best fit”. The present study, in particular, suggests that the use of SM is not useful in itself for achieving better organizational and financial performance. Rather, it is essential to search for a fit between structural, strategic and HRM factors and the HRM objectives for using SM. Within the contextual factors that influence the adoption of SM in HRM, the study suggests considering branch, firm’s size, business strategy and availability of specialized competences within HR department.

From a managerial viewpoint, the study shows that SM can be used in different HR domains, which include but are not limited to social recruiting. Today, SM can be used effectively to support different relational and transformational activities (e.g. internal communication, knowledge exchange, training and development, performance management and skills and job assessment), thus helping organizations to achieve their strategic objectives. The study also shows that the use of SM does not in itself generate positive results for organizations and that greater integration of these tools in HRM is not necessarily associated with better organizational performance. Rather, it is clear that the contribution of Web 2.0 applications depends largely on a company’s capacity to align IT adoption to its broader HR objectives and specific organizational and strategic dimensions. Based on the results of the study, the relational advantages of SM can be mainly exploited in larger companies, where communication, collaboration and knowledge exchange processes are particularly complex. In addition, due to the strategic role of these processes, it is important for the company to internally develop all the skills that are necessary for their effective management. Instead, the transformational use of SM can be useful in small, medium or large contexts, which share the need to innovate (processes, products and services) in order to obtain a competitive advantage over competitors. In these cases, in order to support an effective digitalization of the entire HR function, it can also be convenient to make use of the specialized services offered by external providers. Finally, the use of SM could be non-essential, if not exclusively in the context of recruitment, for companies in which knowledge exchange and innovation are not essential conditions to survive in the market.

The results of the present study should be interpreted with its empirical limitations in mind. First, the study is based on cross-sectional research, which makes it difficult to identify causal links between the variables under investigation. For example, although this study has considered economic and organizational performance as outcomes of social e-HRM, they may instead be determinants of SM usage in HRM. Further research using panel data will be able to establish the direction of the relationships between drivers, configurations and outcomes. Second, most of the variables considered here were measured through subjective responses. This approach may lead to an overestimation of some measures, such as organizational performance, which are a direct consequence of the work of the respondents (senior HR personnel). Lastly, the study relies on data collected in a specific national context, with a sample derived from the clients of an employment agency. Given that these features may limit the generalizability of the results, future research is needed to replicate this empirical study in different national contexts and using more representative samples of companies.

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