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What Countries Can Learn From Each Other About E-HRM Adoption and Use

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Abstract
Due to a paucity of studies examining the adoption and implementation of e-HRM on a global scale, this investigation focuses on diffusion of innovation (DOI) and institutional theories. Questions such, "What factors influence adoption and usage of e-HRM for HRM?" form the backbone of this study. We used a multilevel approach to look at the effects of geography, company structure, and human resource management practices in 3815 businesses across 21 nations. Overall, the results matched the expectations. In particular, governmental frameworks that reward inventive actions are what will decide the rate of e-HRM implementation. The degree to which an organization adopted and used e-HRM was correlated with characteristics such as sector, size, degree of international competition, and level of employee education. The adoption and implementation of e-HRM inside the HR division also seems to need a strategic emphasis on the HR division. Theoretical and practical consequences are discussed.

Keywords: e-HRM adoption, e-HRM usage, diffusion of innovation theory, institutional theory, Global Innovation Index, Cranet

1.Introduction

Human resource management (HRM) and information technology (IT) are integrated to provide benefits for certain groups of workers and their supervisors via what is known as "e-HRM" [1]. E-HRM is a hot issue in the HR industry since it is widely believed that it will help businesses in a variety of ways, including making their HR departments more effective and strategic, and giving them a competitive edge.

Organizational and human resource management (HRM) settings have often been investigated together to address the factors driving e-HRM adoption choices [4, 8-10]. However, there is still no consensus on what exactly drives the adoption of e-HRM. Thirdly, the impact of national-level variables on the uptake of e-HRM innovation—including culture, government policies, and market forces—has seldom been empirically examined [11-13]. Even more so when one considers that cross-national e-HRM studies are primarily limited to English-speaking [14, 15] or European countries [11-13], reviews of the existing e-HRM literature [1, 9] reveal a dearth of research in analyzing institutional factors affecting e-HRM adoption.

Most studies deal with the widespread implementation of e-HRM, while others zero in on narrower aspects of the field as e-recruitment, e-selection, or e-learning [11, 12]. Innovation diffusion research often use dichotomous measures (e.g., queries about whether or not firms have any e-HRM tools), however e-HRM adoption does not always indicate e-HRM complexity and embeddedness inside HR practices. In contrast, few articles examine both the rate of e-HRM adoption and the level of e-HRM innovation [10].

This research seeks to contribute to the HRM literature by filling an existing void: the dearth of cross-national empirical data on the determinants associated with the deployment of e- HRM inside businesses. It does so by drawing on diffusion of innovation theory (DOI) [16] and the institutional literature [17]. What variables affect HRM's acceptance and use of e-HRM technology? To answer this, we use a comprehensive approach that separates the technology and HRM facets of e-HRM adoption and takes into account the national, organizational, and HRM strategic components of e-HRM. We also made a distinction between the degree to which an organization adopts e-HRM and the degree to which it really uses e-HRM.

We begin our investigation of these questions by constructing a theoretical framework and identifying potential elements leading to adoption at the national, organizational, and HRM levels. Then, using a multilevel analytic technique, we poll 3815 businesses across 21 nations to see whether our ideas hold up. Finally, we reflect on the findings and draw implications for further study.

1.Theoretical framework

E-HRM generally refers to the implementation and application of information and communication technology for HR purposes [12]. E-HRM can be considered an inno-vation in terms of HRM [5]. This results not only because information technology en- ables the design of HRM tools and instruments that would not be possible otherwise but also because it creates opportunities to reshape employee-

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management relation- ships, enables HRM departments to improve their strategic orientation, reduces costs/gain efficiency and improves client services [5]. However, technology has both aphysical and a procedural dimension [18]. Therefore, to better define e-HRM, both di-mensions should be taken into account. In particular, Thite, Kavanagh, and Johnson
[19] distinguish between human resources information systems (HRIS) and e-HRM on
the basis of the degree of information technology versus the human resource manage- ment focus. In this vein, HRIS is more focused on systems and technology (e.g., hard-ware, software, IT infrastructure) supporting the move to e-HRM, whereas e-HRM tends to be more HR-function oriented. Therefore, the technological focus is more re- lated to the degree of the physical presence of information technologies that allow HRactivities, while the HRM focus is the degree to which e-HRM is used to enable HR activities [20].

1.Method

1.1 Sample and procedures

The data employed in this study mainly stem from two sources. The first is the Cranetsurvey, one of the most representative large-scale international comparative surveys ofHRM systems. The survey provides comprehensive information about the HRM prac-tices of organizations and uses the participating companies' HR directors as the key informants (for a detailed description of the Cranet approach see [42]).The 2014-2015 dataset covers 3815 organizations across 21 countries, i.e., Austria,Brazil, Croatia, Cyprus, Denmark, Estonia, Finland, Greece, Iceland, Israel, Italy, Lith-uania, Norway, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the USA. The second source of data is the 2015 Global Innovation Index (GII) [43], which is an international comparative measure addressing countries' institutional set- tings and more specifically the estimated innovation by firms and industries and the implementation of national policies supporting innovative behaviours Of the companies examined, 2251 (70.4% of sample) were in the trade and servicessector, 842 (26.19% of sample) were in the manufacturing sector, and only 122 (3.49%of the sample) were in the primary sector of the economy. The majority of the organi- zations, 2486, were private, while 912 were public, 167 were not-for-profit, and 180 were mixed. Finally, 1141 organizations (29.91% of the sample) were multinationals. In 64.70% of the companies, the most senior person in HRM had a seat on the Board of Directors. The majority of the companies also involved HR people in HRM strategy.

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Table 1. Country distribution of data sample (N = 21).

Country	Freq.	Percent	GII
Austria	223	5.85%	54
Brazil	352	9.23%	34.95
Croatia	171	4.48%	41.70
Cyprus	86	2.25%	43.51
Denmark	175	4.59%	57.70
Estonia	83	2.18%	52.81
Finland	182	4.77%	59.97
Greece	184	4.82%	40.28
Iceland	110	2.88%	57.02
Israel	110	2.88%	53.54
Italy	168	4.40%	46.40
Lithuania	145	3.80%	42.26
Norway	158	4.14%	53.8
Russia	131	3.43%	39.32
Serbia	159	4.17%	36.47
Slovakia	262	6.87%	42.99
Slovenia	157	4.12%	48.49
Spain	91	2.39%	49.07
Sweden	285	7.47%	62.40
Switzerland	211	5.53%	68.30
USA	372	9.75%	60.10
Total	3815	100%	

Results

Table 3 presents the coefficients' estimates for the SEM model. As expected, the na- tional innovation system was positively related to both the degree of e-HRM presenceand e-HRM usage for HRM.
The set of hypotheses related to the effect of organizational factors on e-HRM presenceand usage (H2-5) were almost all significant and positive. Hypothesis 2 concerned the relationship between the economic sector of activity and e-HRM presence and usage. The statistical analyses confirmed that the former relationship was significant and pos-itive. Overall, organizational size and operation in a global market increased the likeli-hood that companies would adopt e-HRM and would have a higher e-HRM usage rate.The educational level of employees was positively related to e-HRM presence and us-age.
Turning now to the HRM context, the HR director's involvement on the main Boardof Directors was positively related to e-HRM's physical presence and e-HRM usage. Among the HRM factors, the strategic involvement of the HR function also appeared to be the more salient since it is positively related to both e-HRM adoption and usage.As expected, HRIS outsourcing had a significant positive effect on the adoption of e- HRM but not on e-HRM usage.

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Table 3. SEM Model coefficients

VARIABLES	e-HRM adoption	e-HRM usage
Organizational Size	0.17***	0.13***
Economic Sector	0.17***	0.14***
Global Competition	0.08***	0.07***
Proportion Higher Education	0.16***	0.04***
HRM Seat on the Exec Board	0.15***	0.10***
Strategic involvement of HRM	0.08***	0.07***
e-HRM Outsourcing	0.11***	0.01
M1[gii]	2.35***	1 (constrained)
Constant	-1.25***	0.02
var(M1[gii])	0.01	
	(0.01)	
var(e.e_HRM_adoption)	0.97	
	(0.03)	
var(e.e_HRM_usage)	0.71	
	(0.02)	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Discussion and conclusion

The aim of this chapter was to address the current lack of cross-national analysis on factors associated with the deployment of e-HRM within organizations. We built on diffusion of innovation theory [16] and the institutional literature [17] to disentangle the factors enabling HRM innovation. We created three groups of factors: institutional,organizational, and HRM. Furthermore, we not only investigated whether organizationsadopted e-HRM but also ascertained the intensity of the adoption and diffusion amongHRM practices.Empirically, our results partially confirmed previous studies. However, they also of- fer new insights into unexplored factors and patterns influencing e-HRM adoption and usage. Confirming previous results, organizational size significantly influenced not only e-HRM adoption but also its usage for HRM. In addition, organizations facing global competition – those operating in a global market – are more likely to have highere-HRM adoption and usage rates because of the need to facilitate collaboration across organizational and geographical borders. This suggests that larger organizations and those operating in a global market are increasingly leveraging e-HRM to become morecompetitive and reduce costs [10]. Our results revealed that employees' educational level positively influences e-HRM adoption and usage. This is possibly because of lower probability of failure in its adoption when employees are more educated, but alsobecause of the nature of the tasks typically carried out by employees with high educa- tional levels. In our study, we confirm the role of industry membership in e-HRM adop-tion and usage and support the role of mimetic isomorphic pressures at the industry level whereby companies operating in industries characterized by a high level of e- HRM adoption and usage will be more prone towards innovation adoption and diffu- sion to achieve organizational legitimacy [17].

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References

1.Bondarouk, T., Ruel, H.: Electronic human resource management: challenges in the digital era. Int. J. Hum. Reosurce Manag. 20, 505–514 (2009).
2.Florkowski, G., Olivas-Lujan, M.: The diffusion of human resource informationtechnology innovations in US and non-US firms. Pers. Rev. 35, 684–710 (2006).
3.Bondarouk, T., Ruël, H., Van der Heijden, B.: E-Hrm Effectiveness in a Public Sector Organization: A Multi-Stakeholder Perspective. Int. J. Hum. Reosurce Manag. 20, 578–590 (2009).
4.Marler, J.H., Fisher, S.L.: An Evidence-Based Review of E-HRM and Strategic HumanResource Management. Hum. Resour. Manag. Rev. 23, 18–36 (2013).
5.Ruel, H., Bondarouk, T., Looise, J.: E-HRM: innovation or irritation. An explorative empirical study in five large companies on web-based HRM. Manage. Rev. 15, 364– 381 (2004).
6.Ruël, H., van der Kaap, H.: E-HRM Usage and Value Creation. Does a Facilitating Context Matter? Zeitschrift für Pers. / Ger. J. Res. Hum. Resour. Manag. 26, 260–281 (2012).
7.Marler, J.: Making human resources strategic by going to the net: reality or myth? Int. J. Hum. Reosurce Manag. 20, 515–527 (2009).
8.Panayotopoulou, L., Vakola, M., Galanaki, E.: E-HR adoption and the role of HRM: evidence from Greece. Pers. Rev. 36, 277–294 (2007).
9.Strohmeier, S.: Research in e-HRM: review and implications'. Hum. Resour. Manag. Rev. 17, 19–37 (2007).
10.Teo, T.S.H., Lim, G.S., Fedric, S.A.: The adoption and diffusion of human resources information systems in Singapore. Asia Pacific J. Hum. Resour. 45, 44–62 (2007).
11.Panayotopoulou, L., Galanaki, E., Papalexandris, N.: Adoption of electronic systems inHRM: is national background of the firm relevant? New Technol. Work Employ. 25, 253–269 (2010).
12.Strohmeier, S., Kabst, R.: Organizational adoption of e-HRM in Europe: An empirical exploration of major adoption factors. J. Manag. Psychol. 24, 482–501 (2009).
13.Galanaki, E., Panayotopoulou, L.: Adoption and Success of E-HRM in European Firms.In: Torres-Coronas, T. and Arias-Oliva, M. (eds.) Encyclopedia of Human Resources Information Systems: Challenges in e-HRM. pp. 24–30. Information Science Reference,Hershey, PA, USA (2009).
14.Olivas-Luján, M.R., Florkowski, G.W.: Diffusion of HR-ICTs, an Innovations Perspective. In: Martin, G., Reddington, M., and Alexander, H. (eds.) Technology, Outsourcing & Transforming HR. pp. 231–256. Butterworth- Heinemann, Oxford, UK(2008).
15.Olivas-Luján, M.R., Florkowski, G.W.: The Diffusion of HRITs Across English-Speaking Countries. In: Torres-Coronas, T. and Arias-Oliva, M. (eds.) Encyclopedia ofHuman Resources Information Systems: Challenges in e-HRM. pp. 242–247. Information Science Reference, Hershey, PA, USA (2009).
16.Rogers, E.M.: Diffusion of Innovations. Free Press, New York (2003).
17.DiMaggio, P., Powell, W.: The iron cage revisited: industrial isomorphism and collective rationality in organizational field. Am. Sociol. Rev. 48, 147–60 (1983).
18.Orlikowski, W.J., Scott, S. V.: Sociomateriality: Challenging the separation of technology, work and organization. In: Walsh, J.P. and Brief, A.P. (eds.) The Academyof Management Annals. pp. 433–474. Taylor & Francis, Philadelphia (2008).
19.Thite, M., Kavanagh, M.J., Johnson, R.A.: Human resource information systems: Basics, applications, and future directions. Sage, Thousand Oaks, CA (2012).
20.Marler, J.H., Parry, E.: Human resource management, strategic involvement and e-HRMtechnology. Int. J. Hum. Resour. Manag. 5192, 1–21 (2015).