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The electronic human resources management effectiveness link: a survey of private security industry firms in Zimbabwe

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Abstract

This study investigated the link between implementation of electronic human resources management practices and effective human resources function in the private security sector in Zimbabwe. The research evaluated the effectiveness of electronic human resources practices on organisational performance, quality of human resources service, operational efficiency and the involvement of human resources in the business The post positivist paradigm was adopted for this cross sectional quantitative study, employing a deductive approach and mono method quantitative method as methodological choices. 18 research participants were selected from 3 security companies that had implemented electronic human resources management practices. Close ended questionnaires were used in data collection and SPSS software used for data analysis. Electronic human resources management practices were found to have an impact on effective human resources management performance for quality of human resources management service delivery, and operational performance with respect to cost and time saving. No significant impact on the strategic involvement of human resources management and organisational performance were identified. Challenges of implementing electronic human resources systems were found to include high cost concerns in licensing fees, maintenance and training expenses, and alignment to the business needs. Implementation of electronic human resources management was pointed out to require a change of management strategy which proved difficult to apply due to lack of support from senior management.

Key Words: electronic human resources management, human resources function, information technology, organisational performance, human resources effectiveness

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1. INTRODUCTION

Information technology has been a mega trending phenomenon in the corporate environment for the past half century. The increase in global competition compels companies to rethink speed, reduce wastage, improve on quality and cut down on cost and time for their survival, with technology advancement being the powerful driver which has reshaped the way business is conducted (DeSanctis, 1986, Brynjolfsson and McAfee, 2011, Pärli, 2021, Parida *et a*l., 2019). Organisations have been challenged to shift from a physical technology to information technology, from capital centred economy to human centred economy for effective sustainable performance. Effective organisational performance is now associated with human capital management, making effective human resource management imperative for a firm to remain competitive and successful. The concept of electronic human resources management was first developed and implemented in industrialized countries, with much of electronic human resources management researches conducted in U.S.A (Strohmeier and Kabst, 2009, Parry and Urwin, 2011, Marler and Fisher, 2013).

To improve the effectiveness of organisational human resources systems and overall performance, business entities integrate technology with their human resources functions. Despite claims by electronic human resources management software vendors that modern technology is helpful, Keebler and Rhodes (2002) contradict the notion that electronic human resources management is helpful in creating a strategic human resources policy, cost reduction, higher productivity, increasing quality of labour force and more create responsibility for managers and employees. There is weak empirical evidence to support

this assertion, especially in the setting of developing countries (ibid).

Some private security companies in Zimbabwe, have not yet embraced electronic human resources management systems, manifested by ineffective human resources management system. There is need to explore how human resources effectiveness in technology driven environments could be improved through the electronic human resources management systems. A resource based view (RBV) was adopted to analyse the impact of electronic human resources management on the functional effectiveness of human resources.

Bondarouk and Ruël (2009) define electronic human resources management as 'an umbrella term covering all possible integration mechanism and contents between human resources management and information technology aiming at creating value within and across organisations for targeted employee management'. On the other hand, human resources effectiveness is the HR function's ability to influence business outcomes through their HR interventions (Parry and Tyson, 2011). Research into human resources management performance outcomes by Boudreau and Lawler (2016) showed that human resources management effectiveness is considered the most important HR outcome by executives of organisations.

Parry and Urwin (2011) contend that there has been modest research on electronic human resources management throughout the years, hence sceptical about the value created by electronic human resources management. The general convergence in research is that electronic human resources management should create value by making HRM processes more efficient, of higher quality, more invested in creating long-term opportunities in all departments for targeted employees and management. Bondarouk *et al.* (2017) postulates that electronic human resources management is an effective technical implementation of electronic human resources management not necessarily linked to organisational electronic human resources management effectiveness

Theoretical perspectives used for electronic human resources management research could be grouped into two theoretical considerations; the technology based approach and the resource based view. Citation premised on the Technology Acceptance Model (TAM), technology adoption research provides theories and models that explain an individual's adoption of information technology (IT) innovation. Furthermore, the TAM reflects individual's empirical evidence about their beliefs regarding electronic human resources management and respective usage behaviour (Davis *et al.*, 1989). Alternative focus is on the organisation and strategic theories. Dominant paradigms in the field of strategic management are the competitive forces approach (Porter, 1980) and the resource-based perspective (Parry and Urwin, 2011, Ruel *et al*., 2007, Bissola *et al.*, 2014).

Technology Acceptance Model suggests that when users are presented with new technology, two main factors influence their decision on how and when they will use it; firstly, the perceived usefulness, and perceived ease of use. This Technology Acceptance Model theory may be used to explain the different views on electronic human resources management impact on human resources management effectiveness in various contexts (Venkatesh and Davis, 2000).

The resource based view states that resources are the source of competitive advantages if an organisation exploits a collection of resources that are rare, inimitable, valuable and not be transposable (Bondarouk). Many authors have applied the resource based view to the field of strategic human resources (Wright *et al*., 2001, Nyberg et al., 2014, Barney *et al.*, 2011) through the suggestion that the knowledge, skills and activities of the workforce are core resources that contribute to the organisation's competitive advantage. Lepak and Snell (1999) define human resources function value as the strategic benefits achieved from a particular human resource activity relative to the costs associated with its deployment. When applied to the case of electronic human resources management, the HR function may contribute to an organisation's competitive

advantage by providing more effective and efficient management, development and deployment of the organisation's human resources. The assertion that the HR function can contribute to an organisation's competitive advantage is in line with the demands on the human resources function, where human resources practitioners are under pressure to be strategic as well as being effective within the organisation (Paauwe, 2004, Shaukat *et al.*, 2015, Marchington, 2015, Marler and Parry, 2016, Lengnick-Hall *et al.*, 2011, Fairlie, 2011, Garavan and McGuire, 2010).

Strohmeier (2007) proposed a general framework to structure the electronic human resources management research, with influence on recent research on electronic human resources management. The Strohmeier's e-HRM Research Framework integrates both conceptual and theoretical work. The framework differentiates between context, configuration, and consequences of electronic human resources management and views electronic human resources management as a multi- level phenomenon, stressing the relevance of contextual factors to electronic human resources management and its impact. Contextual factors reflect the attitude of the individual as well as that of the organization in terms of electronic human resources management. The configuration of electronic human resources management determines the consequences of electronic human resources management, while both configuration and consequences are moderated by contextual factors. Consequences are all phenomena that arise from the application of electronic human resources management on the micro-level such as employee outcomes, and human resources' impact on business outcomes at the macro level. These Strohmeier's e-HRM Research Framework's elements and their interaction enable the systematic examination of the electronic human resources management phenomenon.

Based on the expected outcomes of human resources management, business organisations make use of three human resources measures in assessing its performance, viz, effectiveness, efficiency, and impact of human resources function. Boudreau and Lawler (2016) define human resources effectiveness as the outcomes produced by human resources activities, such as the results of learning from training. The concept of electronic human resources management effectiveness was viewed as multi-dimensional by Bondarouk and Ruël (2009), who stated that it can be measured at organisational, team, and individual levels. Acceptance of electronic human resources management applications, systems and technologies by end-users, proves to be the crucial link between the technical implementation of electronic human resources management and effectiveness within the organisation (Al-Maamari *et al.*, 2018; Ruel *et al.*, 2007).

Human resources efficiency refers to the amount of resources used by the HR function compared with the outcome, such as cost per hire. Lengnick-Hall and Moritz (2003), proposes that there is a general consensus within research that electronic the efficient operation of the HR function. A way of proving these claims is by focusing at the performance outcomes of the organisation. Monica and Cristian (2017) identified four efficiency indicators concerned with the human resources function namely, turnover, absenteeism, productivity, and financial outcome in terms of return on investment and capital market.

Boudreau and Lawler (2014) suggested that the impact of the human resources function refer to the business or strategic value created by HR activities, such as reduction in business operational costs, and increase in sales. Martin and Reddington (2010) agree on that the impact of human resources function might be increased by the adoption of electronic human resources management practices.

Academic involvement in electronic human resources management started relatively late, since the 1990s (Ruel *et al.*, 2007). Laumer *et al.* (2010) studied electronic human resources management with businesses that made use of the electronic practices among 144 human resources managers from German top 1000 corporations. Their survey results revealed that human resources managers' most pressing challenges are staff retention and

internal and external employer branding. They concluded that there was need for an electronic human resources management system to both effectively and adequately fill vacancies, as well as efficiently make full use of rare resources.

Strohmeier and Kabst (2009), found that electronic human resources management was a common practice throughout Europe since two-thirds of all organisations already applied electronic human resources management. Major determinants of electronic human resources management adoption were identified as size and work of organisation, and configuration of human resources management (Strohmeier and Kabst, 2009).

Voermans and van Veldhoven's (2007) study on attitude towards electronic human resources management concluded that differences in perceived usability of IT systems and the preferred human resources roles strategic partner (high preference) and employee champion (low preference), were connected to a positive attitude towards electronic human resources systems. User support was considered to be a predictor of a positive attitude towards electronic human resources management for managers. This case-based study on how four of the most competitive Mexican organisations electronic human resources management strategy, discovered that it was critical to consider local idiosyncrasies. This factor was an important aspect in this research study.

Ruel *et al.* (2007) propounded that individual assessment of electronic human resources management applications affects human resources management's technical and strategic effectiveness. The basic expectations are that electronic human resources management practices reduce costs, enhance the human resources service level and supply an HR department space to become a strategic partner.

Hooi's (2006) study showed that Chinese companies considered the readiness and feasibility of implementing electronic human resources management in the small to medium enterprises as dependent on the availability of resources, expertise, financial and technical resources and the attitude of the employees.

Ruel *et al.* (2007) explorative empirical study in five large companies affirmed that the goals of electronic human resources management were mainly to improve human resources' administrative efficiency, and achieve cost reduction. They also found that international companies used the introduction of electronic human resources management to standardize human resources policies and processes.

The findings contribute to the understanding of the basic technology factors of electronic human resources management.

Based on a study conducted in Nigeria, (Vedanthan *et al.*, 2015, Hu *et al.*, 2015) identified challenges of the use and implementation of electronic human resources management practices in developing countries following:

a. Cost implications.
b. Aligning electronic human resources management structures with business objectives.
c. Training.
d. Information security.
e. Change management.
f. Justifiable returns.
g. Customisation and maintenance of electronic human resources management system.

2. MATERIALS AND METHODS

The research strategy of choice for this study was a multiple case study of firms within the private security sector in Harare, Zimbabwe. Creswell (2014) defines case studies as a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals. A case study can contain a single study or multiple studies. Yin (2012) proposed that 2-3 cases are sufficient for literal replication, whilst 4-6 cases should be used for theoretical replication. The research study used three case studies within the private security sector in Zimbabwe to enable for literal replication.

According to (Baxter and Jack, 2008) the evidence generated from a multiple case study design is considered strong and reliable, a requirement in quantitative research data generalisation. Eisenhardt and Graebner (2007) further added that this type of case study allows for wider discovery of theoretical evolution and research questions. Thereby effectively answering the research questions. Multiple case studies enable generation of data that can be compared within each case study and across different case studies, which enhances the thoroughness of research, consistent with the positivist paradigm.

A sample must be representative of the population from which it is drawn to warrant accurate statistical inferences (Khare *et al.*, 2011). A non-probability, convenience sampling technique was used to select respondents as this type of technique is preferred in quantitative research where probability sampling is not possible (Bryman, 2016). A total sample size of 18 participants was drawn from three private security companies Zimbabwe where electronic human resources management practice was being implemented. These were selected based on the fact that their organisations implemented electronic human resources. Primary data was collected through structured questionnaires, divided into three sections of demographics, level of electronic human resources management implementation, and the study variables. The measurement items for electronic human resources application were adopted from Ruel *et al.* (2007), and Lawler (2012). The questionnaires were physically hand-administered to respondents. This mode of instrument delivery allowed for clarification of issues by participants.

Chronbach alpha was used to test internal consistency on a small pre-test sample with knowledge and exposure to electronic human resources management practices. Adjustments were made based on the results of the pre-test. Owen and Hinton (1980) proposed that for reliability to be categorized as excellent it should range from 0.90 and above, high ranging from 0.70 to 0.90, moderate starting from 0.50 to 0.70 and low being below 0.50. Acceptable reliability measure for the study Cronbach Alpha was set at the value of above 0.60.

For content validity HR practitioners reviewed the constructs included prior to administration in the field. These processes ensured construct validity for the study variables. The total Cronbach Alpha (α) for the study construct improved to 0.85.

A sample t-test was used to determine whether the mean of an item was significantly different from the hypothesised value 3, (the middle value of Likert scale). If the p-value (Sig.) is smaller than or equal to the level of significance p=0.05, then the mean of an item is significantly different from the hypothesised value 3. If the p-value is greater than the level of significance p=0.05, then there is no significant difference from the hypothesized mean value 3.

3. RESULTS

Table 1 shows the demographic data gathered in this study. There was a 100% response to the questionnaires as shown in Table 1 that all the participants responded. The target population consisted of 61.1% males and 38.9 % females. This is typical of the private security male dominated industry in Zimbabwe. 61.1 % had bachelor's degree and these formed the majority of the sample population. No respondents in administration or management employment had lower than diploma certificate qualification. Most respondents, 38.9% had 5-10 years' experience on the job.

Table 1. Demographic data

	Frequency		Percentage
Gender	Male	11	61.1
	Female	7	38.9
	Total	18	100.0
	Frequency		**Percentage**
Age	Less than 25	2	11.1
	26-30	4	22.2
	31-35	7	38.9
	36-40	1	5.6
	40+	4	22.2
	Total	18	100.0
	Frequency		**Percentage**
Years of Experience in current position	0-5	4	22.2
	6-10	7	38.9
	11-15	3	16.7
	15+	4	22.2
	Total	18	100.0
	Frequency		**Percentage**
Level of Education	Certificate	0	0.0
	Diploma	2	11.1
	Bachelors'	11	61.1
	Masters	4	22.0
	Doctorate	1	5.6
	Total	18	100.0

3.1 Hypothesis testing on the impact of electronic human resources management on effective HR performance

a. H_1 There is a positive relationship between electronic human resources management practices and effective human resources performance in an organisation.

Table 2 presents the impact of electronic human resources management practices on effective HR performance in an organisation. Electronic Human Resources Management practices have a positive impact on the effectiveness of the human resources function (T value= 11.412, p<.05).

Table 2: Impact of electronic human resources management practices on effective HR performance

t value	Df	Sig.
11.412	8	.000

The mean of the sampled population is significantly different from that of the population. This indicates that electronic human resources management practices improve the effectiveness of the HR function within the organisation. Hypothesis 1 is therefore accepted that '*there is a positive relationship between electronic human resources management practices and effective HR function'.*

The results resonate with the research finding by Strohmeier and Kabst (2009) and Kaufman (2015). Generally, studies on the impact of electronic human resources management on HR effectiveness show electronic human resources management to positively impact on HR and contributing to its effectiveness (Strohmeier, 2007, Stone and Dulebohn, 2013, Shilpa and Gopal, 2011).

b. H_2 There is a positive relationship between electronic human resources practices and organisational performance.

Table 3 presents the impact of electronic human resources management practices on organizational performance. The results show that there is no significant difference between the mean of the sample population and the hypothetical mean of the population 3 (t-value=2.191, p> 0.05).

Table 3: Electronic human resources management impact on organisational performance

t-value	Df	Sig.
2.191	8	0.60

Thus, based on these results, the use of electronic human resources management practices has no influence on organisational

performance. Hypothesis 2 is rejected that, '*there is a positive relationship between electronic human resources practices and organisational performance*'.

These research findings are contrary to reviewed literature, which suggest that the use of technology pushes HRM into new horizon and influence organisational performance (Goddard and Melville, 2004). In fact, many authors linked the use of electronic human resources management structures to superior organisational performance (Gardner *et al.*, 2003; Marler and Parry, 2016). The discrepancy in the results could be explained by contextual differences as most of the research studies were conducted in multi- national companies in developed economies. This research study was conducted in Zimbabwe, focusing on organisations within the private security industry, presenting challenges that are unique to developing countries. These challenges include unreliable internet connectivity and epileptic power supply. Hu *et al.* (2015) noted that it is difficult to derive benefits from electronic human resources management systems that require 24 hours of power supply, when the power supply is unreliable.

c. H_3 Electronic human resources management practice contribute to better operational performance in terms of cost and time saving.

Table 4 presents the impact of electronic human resources management practices of HR operational performance in terms of time and cost saving. It shows a significant difference between the sample mean and the hypothetical population mean of 3 (t-value=8.632, p<0.05).

Table 4: Impact of electronic human resources management practices on operational performance in terms of time and cost saving

t-value	Df	Sig.
8.632	8	.000

Hypothesis 3 is accepted, that '*electronic human resources management practices contribute to better operational performance in terms of cost and time saving*'.

These findings are consistent with results of previous research such as (Ruel *et al.*, 2007) who postulated that electronic human resources management can improve operational performance by increasing cost efficiencies, improving communication process and decreasing time to perform particular HR processes leading to growth in productivity and financial outcomes. Marler and Fisher (2013), Davoudi and Fartash, (2012), Wickramasinghe (2010) and Lengnick-Hall and Moritz (2003), also ascertained that electronic human resources management enhances the human resources effectiveness through cost reduction strategies such as reduction in head count, shortening of cycle, ensuring timely completion of work, effective communication, timely information dissemination and enhancement of control over operations. These are essential to the survival of private security companies in Zimbabwe due to high competition, sophistication in crime and consumer tastes as well as technology.

d. H_4 There is a positive relationship between electronic human resources management practices and quality of human resources service delivery

Table 5 illustrates the impact of electronic human resources management on the quality of HR service. The results display that there is a significant difference between the sample mean and the hypothetical population mean at t-value=8, p<0.05.

Table 5: Impact of electronic human resources management on quality of HR service

t-value	Df	Sig.
8	8	.000

Thus, hypothesis 4 is accepted, '*there is a positive relationship between electronic human resources management practices and quality of human resources service delivery*'.

The results align with Wahyudi and Park (2014) who agreed that electronic human resources management practices improve the quality of HR processes. Quality of HR services is measured in terms of customer and employee satisfaction, accuracy of HR information, consistency in HR policy and

duty execution. Lepak and Snell (1999) state that electronic human resources management has the potential to substitute physical capabilities by leveraging digital assets, improving standardization and ready and reliable access to information. The claims are clearly evident within the security industry where physical guard services are speedily being replaced by well-organized electronic monitoring technology that provide consistent and high quality services.

e. H_5 Organisations who use electronic human resources management tools have greater strategic participation in organisation business strategy.

Table 6 highlights the impact of electronic human resources management of HR strategic participation. There is no significant difference between the mean of the sample population and that of the hypothetical population mean (t-value= 2.051, P>0.05).

Table 6: Impact of electronic human resources management on HR strategic participation

t-value	Df	Sig.
2.051	4	.110

The research Hypothesis 5, '*organisations who use electronic human resources management tools have greater strategic participation in organisation business strategy*' is rejected.

These results contradict research findings by Parry and Tyson (2011) and Wahyudi and Park (2014) which showed that electronic human resources management practices released the administrative responsibilities and focused on strategic and value added activities. Ruel *et al.* (2007) concluded that strategic orientation was one of the perceived benefits of implementation or electronic human resources management. On the other hand, Strohmeier and Kabst (2009) noted that results clearly linking electronic human resources management to strategic participation are somewhat ambiguous, hinting that electronic human resources management could contribute to a more strategic role of HR. In a multiple case study of 5 companies, it was established that 2 out of the 5 organisations had clearly defined HR strategies, while the others had only general objectives, but the link to electronic human resources management to the overall HR strategy was less clear (ibid).

3.2 Challenges in the use and maintenance of electronic human resources management systems

The research investigated the challenges of adopting electronic human resources management systems affecting their impact on effective HR performance. Noteworthy challenges included high cost concerns in licensing fees, maintenance and training expenses, alignment to the business needs, and implementation of electronic human resources management was pointed out to require a change management strategy which proved difficult to apply due to lack of support from senior management. These challenges were also noted by Banerji (2013) and Sylvester *et al.*, (2015). Problems unique to a developing country setting and particular to Zimbabwe were highlighted such as lack of reliable internet service, inadequate coverage, and persistent power outages.

4. CONCLUSIONS

The study sought to explore the impact of electronic human resources management on human resources effectiveness with a view of improving human resources management performance within technology driven environments of private security companies in Zimbabwe. The adoption of electronic human resources management by private security companies in Zimbabwe had a positive impact on the effectiveness of the HR function in terms of quality of service delivery, operational performance in relation to cost reduction and time saving. However, implementation of electronic human resources management practices has no impact on the level of HR strategic participation and organisational performance. Challenges in the use and maintenance of electronic human resources management system affect its impact on the effectiveness of HR function.

Traditional human resource management systems in Zimbabwe are gradually being

replaced by electronic human resources management systems as the need for prompt decision making comes into furore. The major challenge that retards transition progress is the financial resource investments. Despite the challenges, Zimbabwe is poised towards the adoption of web-based human resources management systems which simplify the HR functions to create dynamic and operational proficiencies and contribute significantly on HRM effectiveness.

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