THE IMPACT OF HRIS ON ORGANIZATIONAL EFFICIENCY: RANDOM OR INTEGRATED AND HOLISTIC?

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Abstract

This study assesses the extent to which the HRIS enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on areas of HR, time management, cost management and managerial satisfaction with the system). A sample of 101 managers was drawn from a Municipality in South Africa using cluster sampling. Data was collected using a self-developed, closed-ended questionnaire comprising of 28 items, the psychometric properties (validity, reliability) of which was statistically assessed using Factor Analysis and Cronbach's Coefficient Alpha respectively. Data was analyzed using inferential statistics. The results indicate that HRIS significantly enhances overall organizational efficiency and its sub-dimensions (HR functions, time management, cost management and managerial satisfaction with the system) in an inter-related and holistic manner, though in varying degrees. Hence, the implementation of a proper HRIS has the potential to bring about operational effectiveness and enhance the realisation of the HR and corporate strategy, thereby ensuring organizational effectiveness.

Keywords: Integrated and Holistic Human Resource Information System (HRIS), Human Resource Functions, Time Management, Cost Management, Managerial Satisfaction, Organizational Efficiency

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Introduction

Whilst other functional units in organizations received budgeting for IT and were automated with the advent of technology, the HR function was the last to receive such support, mainly because of its complexity and multitude of data from recruitment to termination of employees. Despite its delayed automation HR has managed to move from the dark and paper driven age to state-of-the-art information systems in a short period of time. Technology can vastly improve the information available to HR, allowing the department to raise the value of the organization's human capital. Furthermore, by focusing on using such technology to continuously improve the quality of the work environment, HR has the ability to reduce turnover, better develop employees, and attract the best in new recruits. However, the benefits of the Human Resource Information System (HRIS), if not effectively implemented, may not be realized or may only be randomly achieved in certain areas in an organization thereby making the investment unprofitable and questionable. The converse of achieving a valuable, long term investment for an organization can only be realized if the HRIS successfully impacts on all facets of the work environment in an integrated and holistic way. Hence, this study assesses the success of the

implementation of HRIS in a municipality in terms of its impact on HR functions, time management, cost management, managerial satisfaction with the system and overall organizational efficiency.

HRIS can make a tremendous impact on the HR function as it allows companies to store and retrieve large amounts of information quickly and efficiency. This results in the elimination of work duplication and ensures streamlined processes, thereby minimizing cost. As a result of the HRIS, HR staff also spends less time on administrative tasks and engage rather on strategic decisions on organizational strategy. Most important, HRIS can assist a company achieve competitive advantage and this leads to overall organizational efficiency. Effectively achieving such goals will ensure managerial satisfaction with the HRIS.

Definition and Nature of HRIS

A Human Resource Information System (HRIS) uses a systemic procedure for maintaining, collecting, storing, retrieving, and validating data needed by an organization regarding their human resources, personnel activities and organizational characteristics. It can be said that HRIS is the link between Human Resource Management (HRM) activities and information technology (Kovach & Cathcart, 1999).

Recent developments in technology have made it possible to create a real-time information based, self service, and interactive work environment (Boateng, 2007). Personnel information systems have evolved from the automated employee record keeping from the 1960s into more complex reporting and decision systems of late (Boateng, 2007). Hence, HRIS is the integration of software, hardware, support functions and system policies and procedures into an automated process formulated to harness the strategic and operational activities of the human resources department and managers in the organization (Chauhan, Sharma & Tyagi, 2011).

Importance of HRIS

The HR function of organizations is changing rapidly, reacting to a changing social and organizational environment and rapidly evolving information technologies. Social and organizational changes exert pressure on HR professionals to provide expanded services of a higher quality, faster, and seamlessly linked with other corporate functions (Hendrickson, 2003). Information technologies, which provide enabling technologies to assist HR professionals in the delivery of services, have also simultaneously increased the expectations that employees, managers, customers, suppliers, and regulators have of the HR function (Hendrikson, 2003).

According to Iain Hopkins (not dated), HRIS needs are determined by the importance that the organization places on administrative efficiency, compliance and strategic direction. He goes on to add that with a fully integrated system one is able to access a competency library, recruitment, performance management, remuneration planning and review, training, talent management and succession. This demonstrates the full capabilities of a HRIS and the importance it has if it is used to its full potential. Evidently, HRIS has the potential to transform HR into a more efficient and strategic function by allowing HR to extend beyond basic administrative tasks to strategic applications (Palframan, 2002).

With the debut of large, competitive, dynamic and multi-national industries, companies are now considering global HRIS implementation projects. There are numerous global HR systems available that can support HR processes from employee recruitment to termination (Carneiro, 2011) but global HRIS implementation projects face the challenges of differences and uniqueness in different countries and regions such as cultural differences and language barriers. However, a global HRIS enables more accurate planning and more transparent decisions. Global HRIS transcends beyond the ability to analyse and use employee data as the system supports geographically diverse operations to share ideas and innovations (Miller, 2004) and to create an ethos of cultural cohesion and closeness for employees (Insight Consulting Partner, 2004).

Whether local or global, HRIS has the potential to bring about improved planning and program development, decreased administrative and HR costs, accuracy of information and enhanced communication at all levels, thereby adding competitive value to the organization.

Impact of HRIS on HR functions

HR information systems support activities such as identifying potential employees, maintaining employee records and creating programs to develop employees' talent and skills (Bal, Bozkurt & Ertemsir, 2012; Targowski & Deshpande, 2001). Shani and Tesone (2010) agree with Targowski and Deshpande (2001) that HRIS contributes significantly to the various HR functions due to the common database to all individual HR related units such as payroll, benefit administration and pension. This prevents work duplication and various work processes becomes more efficient. Furthermore, Bal *et al.* (2012) believes that HRIS can support various HR practices such as workforce planning, staffing, compensation, salary forecasts and employee relations.

However, Shani and Tesone (2010) note that having a recruitment module in a HRIS does have a disadvantage in that online recruitment only provides a pool of active job seekers, while often the best candidates are actually passive. Poorly designed web sites could also damage an organization's image and result in loss of desirable candidates. However, the relationship between the selection function and a HRIS is seen more favourably. This is due to the fact that resumes sent through the internet or email can be scanned for keywords relating to specific knowledge, skills and competencies thus reducing the need to manually carry out this task (Shani & Tesone, 2010).

Impact of HRIS on time management

The HRIS removes work duplication and various work processes are streamlined thus leading to efficiency. Thus, the HRIS can lead to incremental leaps in efficiency and response time of traditionally labour intensive HR activities (Dery, Grant & Wiblen, 2006; Targowski & Deshpande, 2001). Furthermore, researchers believe that when the HR functions was computerised into HRIS, faster decision making was carried out on the development, planning and administration of HR because data became much easier to store, update, classify and analyze (Ngai & Wat, 2006; Sergio, Pez, Sebasti & Ugarte, 2010; Shani & Tesone, 2010; Targowski & Deshpande, 2001).

Impact of HRIS on cost management

It is noted that it is proving more challenging to convince top management of the need to change an inefficient system as the cost factor is sometimes

viewed as unnecessary excessive expenditure (Shani & Tesone, 2010). Ngai and Wat (2006) agree with Shani and Tesone (2010) that the cost of setting up and maintaining a HRIS can be excessive, which is a major obstacle in its implementation. In their study, barriers preventing the implementation of HRIS were examined and it was concluded that the greatest barrier to the adoption of HRIS is insufficient financial support. Kavangh and Thite (2009) state that due to the complexity and data intensiveness of the HRM function, it is one of the last management functions to be targeted for automation compared to other business functions. Lori and Elaine (2002) agree with Kavangh and Thite (2009) that HR was the last functional unit in organizations to receive budgeting for IT which in turn is a true reflection of the low status HR has traditionally held in most organizations. HR is often viewed as a cost centre, not a profit centre for organizations and held a low status within organizations until recent years.

Organizations sometimes realize the cost reductions and efficiency gains early in the implementation of an HRIS system, so they provide compelling evidence needed to get a project up and running. The payback period or the time it takes to recoup the investment may be as short as one to three years (Boateng, 2007). Johnson and Guental (2011) believe that HRIS can prevent costly benefits error thus saving organizations on costs otherwise incurred. Furthermore, the HRIS will enable the organization to reduce costs through the automation of previously labour intensive activities, can be used to maintain and facilitate communication up and down the organization and can be an instrument for greater efficiency (Wiblen, Grant & Dery, 2010).

Impact of HRIS on organizational efficiency

HR departments provide broader and more effective services when they operate via a web portal and this can be viewed as making the organization more efficient. In most organizations the full potential of the HRIS is not fully utilized; this can be attributed to firms achieving automation of existing HR processes but failing to progress to a more advanced stage of an information culture (Beadles, Lowery & Johns, 2005; Sergio *et al.*, 2010). Shibly (2011) adds that few organizations systematically attempt to measure the effectiveness of their information system, whilst HR managers are stressing the need to better understand the factors that contribute to the success of HRIS.

Brown (2013) attributes the efficiency of HRIS to the system's ability to produce more effectively and faster outcomes than done on paper. However, Brown (2013) also cautions that implementing an HRIS program may be perceived as being a necessary step for an organization, but unless it will be an effective tool for HR functions, it will not lead to greater efficiency but may hinder it instead.

However, Sergio *et al.* (2010) believe that an effective HRIS is imperative in today's organizations in order to cope with a number of issues such as increasing organizational demands, a more extensive use of and need for information, continuous pressures to reduce costs, as well as making HR a more strategic business partner. HRIS has become a key enabler to increase organizational performance and effectiveness and the purpose of HRIS has become more complete and complex in recent years (Sergio *et al.*, 2010). A HRIS is a response to achieve cost effectiveness, reduce administrative workload, standardize HR processes or simply add strategic value in the decision making of the organization. There is consensus among various practitioners that HRIS is a powerful tool to enhance the HR capability of an organization.

Shani and Tesone (2010) state that HRIS is currently perceived as one of the important factors influencing the role of the HR function and the adoption of HRIS is likely to promote HR to the anticipated position of strategic partner in the organization. Evidently, a new era made its debut as the HR function and its system support became strategic partners in managing change within an organization (Lori & Elaine, 2002; Targowski & Deshpande, 2001; Pasqualetto, 1993). Successful HRIS supports the planning and implementation of managerial key processes in the organization such as executive decision making, technology selection and organizational reporting structures. Hence, the new HRIS system became an active tool to help employees engage more easily with the organization and each other thereby steering greater productivity and business execution (Beadles *et al.*, 2005; Successfactors, 2013).

Managerial satisfaction with the HRIS

Researchers have found that the HRIS helps managers to be more effective and is their pivotal tool (Kovach & Cathcart, 1999; Sergio *et al.*, 2010). Sergio *et al.* (2010) found that the HRIS (a) is flexible to interact with, (b) is useful to perform the employees' job and (c) increases employees' productivity. It was also found that when users perceive the system as being easy to learn and use, they are expected to utilize the system more.

Shani and Tesone (2010) believe that by using the HRIS, professionals can improve their performance by gaining better knowledge of the organization and its employees which lead to facilitating participation in strategic planning and implementation. Shani and Tesone (2010) also note that HR managers can use HRIS to evaluate their own business performance (by amongst others, calculating return on training investments, turnover costs) and these can be used as evidence to top management that HR is a legitimate strategic partner and is crucial for achieving organizational goals. However, researchers

believe that a major concern of implementing an integrated HRIS is the loss of a personal touch in the interaction with employees (Johnson & Guental, 2012; Sergio *et al*., 2010). Hence, the depersonalization is identified as a trade off to automation and employee self-service portals. Furthermore, researchers believe that due to the increasing use of information technologies in HR planning and delivery, the way people in organizations look at the nature and role of HR itself may change in the future (Johnson & Guental, 2012; Kavanagh and Thite, 2009). This could influence the attitude of HR managers towards their jobs and profession as they could feel that the technology (HRIS) lessens their status within the organization. However, more HR practitioners are of the view that HRIS has more benefits than drawbacks.

Objectives of the study

This study aims:
- To assess the extent to which the HRIS enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on HR functions, time management, cost management and managerial satisfaction with the system).
- To evaluate how much of the variance in overall organizational efficiency as a result of the HRIS is due to its impact on HR functions, time management, cost management and managerial satisfaction with the system respectively.

RESEARCH DESIGN

Research approach

The research methodology has been designed to assess the extent to which the HRIS enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on HR functions, time management, cost management and managerial satisfaction with the system).

Respondents

The population comprised of managers of the Municipality from the eight different departments, namely, Office of the City Manager, Finance, Programme Management, Corporate and Human Resources, Governance, Human Settlements and Infrastructure, Community and Emergency Services and, Economic Development and Planning. Managers were chosen as the population due to their increased roles and responsibility, span of control and their ability to execute a wide range of business related decisions. Managers in the Municipality are graded according to the Municipalities grading system. The scale begins at 1, which represents the lowest job level and advances until 25, which represents the most

senior position(s) in the municipality. Managers that were used in this study are Level (Task) 14 and above.

The total number of managers from Level 14 and above from all eight departments is 130. According to Sekaran and Bougie (2010), the corresponding minimum sample size for a population of 130 is 97, thereby confirming the adequacy of the sample for the study. Cluster sampling will be used due to the concentration of managers in the eight different departments. Using cluster sampling will also reflect how the different departments view their HRIS respectively. In terms of the composition, 41.6% of the managers were 41-50 years of age, 23.8% were 31-40 years, 18.8% where 21-30 years and the remaining 15.8% were over 50 years old. In addition, 58.4% of the managers were females whilst 41.6% were males. The majority of the respondents were Indian (42.6%), followed by Black (40.5%), then Whites (11.9%) and lastly, Coloureds (5%). In terms of tenure, the majority of the managers are working in the organization for 0-5 years (47.5), 22.8% served for a term of 16 years and above, 16.8% for 6-10 years and 12.9% for 11-15 years. The majority of the sample was from Corporate and Human Resources (64.4%) whilst the remaining percentage almost equally represented all other clusters/departments. The adequacy of the sample was further determined using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.838; approx. $\chi^2 = 1460.562$) and the Bartlett's Test of Spherecity (378, $p = 0.000$), which respectively indicated suitability and significance. The results indicate that the normality and homoscedasticity preconditions are satisfied.

Measuring Instrument

Data was collected using a self-developed questionnaire consisting of Section A (biographical information relating to age, gender, race, tenure and cluster/department) and Section B which included items relating to the perceived impact of HRIS on organizational efficiency in the Municipality. The biographical data in Section A was collected using a nominal scale with pre-coded option categories and the items in Sections B were measured using a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neither agree/not disagree (3), agree (4) to strongly agree (5). Section B of the questionnaire was formulated on the basis of identifying recurring themes that surfaced during the literature review and the 28 items included in the questionnaire related directly to the constructs being measured (7 items relate to the impact of HRIS on the HR functions, 5 items assess the impact of HRIS on time management, 5 items relate to the impact of HRIS on cost management, 6 items assess managerial satisfaction with the HRIS, and 5 items relate to the impact of HRIS on organizational efficiency). This ensured

face and content validity. Furthermore, in-house pretesting was adopted to assess the suitability of the instrument. Pilot testing was also carried out using 6 managers, selected using the same procedures and protocols adopted for the larger sample. The feedback from the pilot testing confirmed that the questionnaire was appropriate in terms of relevance and construction.

Statistical measures of the questionnaire

The validity of the questionnaire was assessed using Factor Analysis. A principal component analysis was used to extract initial factors and an iterated principal factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. Only items with loadings >0.5 were considered to be significant and when items were significantly loaded on more than one factor only that with the highest value was selected. In terms of the sub-dimensions of HRIS being assessed (Section B), 5 factors with latent roots greater than unity were extracted from the factor loading matrix. Factor 1 relates to managerial satisfaction with the HRIS and accounts for 17.4% of the total variance, Factor 2 pertains to the impact of HRIS on cost management and accounts for 13.8% of the total variance and Factor 3 relates to the impact of HRIS on time management and accounts for 11.7% of the total variance, Factor 4 relates to the impact of HRIS on the HR functions and accounts for 8.9% of the total variance and Factor 5 pertains to the impact of HRIS on organizational efficiency and accounts for 7.1% of the total variance in determining the impact of HRIS in the Municipality. The reliability of Section B of the questionnaire relating to the impact of HRIS in the Municipality was determined using Cronbach's Coefficient Alpha (Alpha = 0.918). This alpha coefficient indicates a very high level of internal consistency of the items and hence, a high degree of reliability. The reliabilities for the individual

dimensions were also assessed and ranged from 0.697 (impact of HRIS on HR functions), to 0.705 (impact of HRIS on organizational efficiency), to 0.804 (impact of HRIS on cost management), to 0.828 (impact of HRIS on time management) to 0.845 (managerial satisfaction with the HRIS).

Administration of the measuring instrument

The questionnaire was sent to all managers via electronic mail. Respondents then clicked on the link provided in the e-mail to complete the questionnaire. The survey tool used is SurveyMonkey.

Statistical analysis

Inferential statistics (correlation, multiple regression) were used to analyse the data, which was captured using Excel (Version 5), processed with SPSS and presented using tabular representations.

RESULTS

The integrated and holistic impact of the HRIS on organizational efficiency

Intercorrelations were used to assess the extent to which the HRIS enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on HR functions, time management, cost management and managerial satisfaction with the system).

> **Hypothesis 1:** The HRIS enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on HR functions, time management, cost management and managerial satisfaction with the system) (Table 1).

Table 1. Inter-correlations: Impact of HRIS on organizational efficiency and its dimensions

Dimension	r p	HRF	TM	CM	MS	OE
Impact of HRIS on HR functions (HRF)	r	1				
Impact of HRIS on time management (TM)	r p	0.511 **0.000***	1			
Impact of HRIS on cost management (CM)	r p	0.419 **0.000***	0.517 **0.000***	1		
Managerial satisfaction with the HRIS (MS)	r p	0.402 **0.000***	0.515 **0.000***	0.605 **0.000***	1	
Impact of HRIS on overall organizational efficiency (OE)	r p	0.263 **0.008***	0.423 **0.000***	0.554 **0.000***	0.704 **0.000***	1

* p < 0.001

Table 1 indicates that the HRIS significantly enhances organizational efficiency in an interrelated and holistic manner (as determined by its impact on HR functions, time management, cost management

and managerial satisfaction with the system) at the 1% level of significance. Hence, hypothesis 1 may be accepted.

In addition, Table 1 also indicates that a significant relationship of moderate strength exists between:

- the impact of HRIS on HR functions and the impact of HRIS on time management (r = 0.511),
- the impact of HRIS on time management and the impact of HRIS on cost management (r = 0.517),
- the impact of HRIS on time management and managerial satisfaction with the HRIS (r = 0.515), and
- the impact of HRIS on cost management and the impact of HRIS on overall organizational efficiency (r = 0.554).

Furthermore, there is a fairly strong relationship between the impact of HRIS on cost management and managerial satisfaction with the HRIS (r = 0.605). There is also a strong relationship between managerial satisfaction with the HRIS and the impact of HRIS on overall organizational efficiency (r = 0.704).

From Table 1, it is evident that the HRIS enhances overall organizational efficiency and its sub-dimensions significantly and in an inter-related manner. This means that the HRIS has the potential to enhance numerous aspects of organizational efficiency (as determined by its impact on HR functions, time management, cost management and managerial satisfaction with the system) simultaneously. The implication is that any improvement in the implementation of the HRIS will have a rippling effect on all sub-dimensions of organizational efficiency and hence, has the potential to further enhance overall organizational efficiency.

Hypothesis 2: The influence of the HRIS on the sub-dimensions of organizational efficiency (impact on HR functions, time management, cost management and managerial satisfaction with the system) significantly account for the variance in overall organizational efficiency.

Table 2. Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.984[d]	0.969	0.967	0.9586

Table 2 indicates that the influence of the HRIS on the sub-dimensions of organizational efficiency (impact on HR functions, cost management, time management, managerial satisfaction and organizational efficiency) significantly account for 96.7% (Adjusted R^2 = 0.967) of the variance in determining overall organizational efficiency. In order to assess the extent to which these dimensions (enhanced by the HRIS) impact on overall organizational efficiency, Beta loadings were assessed (Table 3).

Table 3. Multiple Regression Coefficients

Model	Standardized Coefficients	t	p
	Beta		
Managerial satisfaction with the HRIS	0.258	6.365	0.000*
Impact of HRIS on time management	0.270	10.806	0.000*
Impact of HRIS on cost management	0.277	15.287	0.000*
Impact of HRIS on HR functions	0.212	9.318	0.000*

* $p < 0.01$

Table 3 indicates that the dimensions of the sub-dimensions of organizational efficiency (impact on HR functions, cost management, time management, managerial satisfaction and organizational efficiency), enhanced individually by the HRIS, impacts on overall organizational efficiency in varying degrees. These sub-dimensions, in descending level of impact on overall organizational efficiency based on Beta loadings, are:

- Impact of HRIS on cost management (Beta = 0.277)
- Impact of HRIS on time management (Beta = 0.270)
- Managerial satisfaction with the system (Beta = 0.258), and
- Impact of HRIS on HR functions (Beta = 0.212).

It is, therefore, evident that the HRIS is having a positive impact on HR functions, time management, cost management and managerial satisfaction with the system individually and jointly enhances overall organizational efficiency. The HRIS, therefore, holistically enhances overall organizational efficiency.

DISCUSSION OF RESULTS

This study assesses the impact of the HRIS on overall organizational efficiency. Investopedia (2012) defines organizational efficiency as attempts by a company to stay efficient and competitive by keeping inventory level down and speeding up the collection of outstanding receivables.

The integrated and holistic impact of the HRIS on organizational efficiency

In this study, the HRIS significantly enhances overall organizational efficiency and its sub-dimensions (HR functions, time management, cost management and managerial satisfaction with the system) in an inter-related and holistic manner, though in varying degrees. The impact of the HRIS on all dimensions determining organizational efficiency in the municipality significantly correlates with each other. This signifies that an improved impact of HRIS of any of the dimensions determining organizational efficiency may have a snowballing effect on all other dimensions, thereby spiralling a positive impact on organizational efficiency.

Evidently, the perceived positive impact of the HRIS on HR functions, time and cost management in the target organization may have contributed to managerial satisfaction with the HRIS. However, Beadles *et al.* (2005) found that even though HR managers were mostly satisfied with the system, they did not perceive that it had much impact on HR functions such as recruitment, training or forecasting staff needs. Successfactors (2013) and Shibly (2011) disagree with Beadles *et al.* (2005) and emphasize that HRIS can expedite the information gathering process and free up the HR department to focus on more strategic activities that affect the entire work force. This enables HR to use this up-to-date, centralized information to retain and develop the high performing employees by linking compensation to performance, identifying and educating the talent pipeline, and developing specific HR strategies to communicate as well as support the organization's corporate goals and objectives. Furthermore, when the HR functions were computerised into HRIS, faster decision making was carried out on the development, planning and administration of HR because data became much easier to store, update, classify and analyze (Ngai & Wat, 2006; Shani & Tesone, 2010). Such positive influences explain the significant and moderate relationship between the impact of HRIS on time management and cost management in the current study.

The current study also found a significant relationship between the impact of HRIS on time management and HR functions, cost management, managerial satisfaction with the HRIS and organizational efficiency respectively. Evidently, HRIS can lead to incremental leaps in efficiency and response time of traditionally labour intensive HR activities. This removes work duplication and various work processes are streamlined thus leading to efficiency. HR staff will, therefore, spend less time on day-to-day administrative issues and more time on strategic decision making and planning which has a direct impact on productivity and profitability of an organization (Targowski & Deshpande, 2001; Dery *et al.*, 2006). Likewise, Sergio *et al.* (2010) believe that the automation of processes and the simplification of HR transactional activities generate an administrative advantage which can be measured as a reduction in time of HR staff to achieve expected results.

However, Beadles *et al.* (2005) found that perceptions of the effects of a HRIS on time savings are mixed. The HR functions of recruitment, training, selection were not positively influenced as results indicated that there were little time savings in these areas. However, Beadles *et al.* (2005) goes on to explain that certain institutions did in fact realize some saving on other administrative tasks such as processing paperwork, correcting errors and inputting data. A clear distinction was drawn between time saving on the various HR functions and administrative tasks. One can examine a clear time saving on the latter of the two variables that were examined. Bal *et al.* (2012) disagrees with Beadles *et al.* (2005) and believes that the use of web technology to deliver HR will leave the specialist with more time to perform strategic activities. Likewise, Kanthawongs (2004) states that HRIS can be used for administrative purposes in organizations which leads to operational efficiency that reduces cost and time. Brown (2013) makes reference to IBM's paperless online HR environment which saved the company $1, 2 million per year on printing and mailing costs. This suggests that a HRIS can indeed save an organization a substantial amount of money thereby justifying the implementation and use of a HRIS. A study investigating the reasons for introducing a HRIS revealed that 79% of 33 firms recognised cost savings as the main driving force (Sergio *et al.*, 2010). In a similar study conducted by Lori and Elaine (2002) it was found that a good e-recruiting model in a HRIS can reduce the hiring time by two-thirds and lower costs by 90%.

The other use of HRIS is to provide more analytical decision support which is related to operational effectiveness. Many authors have agreed that the ultimate purpose of the HRIS is strategic due to the quality and value of the information provided to managers and HR staff for decision making purposes and secondly, to enable HR executives to concentrate on more strategic HR activities and decisions and influence business strategy (Beadles *et al.*, 2005; Lori and Elaine, 2002; Sergio *et al.*, 2010; Shani & Tesone, 2010; Successfactors, 2013; Targowski and Deshpande, 2001). As a result of successful HRIS, HR can potentially become more actively involved in setting executing corporate strategy thus leading to organizational efficiency (Shani & Tesone, 2010). Furthermore, HRIS can facilitate strategic value generation by helping design and implement internally consistent policies and practices that ensure that human assets contribute to achieving business objectives (Hill, Jerram & Troshani, 2010). Such outcomes of HRIS justify the significant relationship found between the impact of HRIS and managerial satisfaction with the system in the current study.

Johnson and Gueutal (2012) maintain that organizations that use HRIS to delegate HR transactions as well as data maintenance to employees will outperform those using these systems solely as HR compliance or reporting tools. McElroy (1991) agrees with this view and states that information systems are expected to play a strategic role in influencing behaviour and helping businesses to achieve their goals.

RECOMMENDATIONS AND CONCLUSION

The multiple impacts of the HRIS on organizational efficiency emphasizes the need to ensure the implementation of an effective HRIS. In order to ensure the positive influence of HRIS on HR functions, it is imperative that the system is aligned with all key HR functions such as the performance management and compensation processes. The impact of HRIS on cost management may be enhanced training in the use of the system and identifying super-users in each department to mentor employees in the effective use of the system. Historical documents should be available on a central drive and all HR functions should be implemented in order to ensure a full return on investment in the HRIS. In order to ensure a positive impact of time management, the HRIS system must be user friendly and easy to navigate and should cater for all business processes. Managerial satisfaction can be enhanced by ensuring that all contact details of HR are on the system, all HR functions can be effectively managed, a dashboard functionality exists to view high level summary information and information sharing with top management is enabled to ensure effective strategic level decision making and the prompt achievement of organizational goals. Undoubtedly, an effective and well implemented HRIS can provide strategic direction, support business strategy and has the potential to effectively execute corporate strategy.

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