Relationship between software management and human resource management

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Abstract **– Software xmanagement xhas xgreatly ximpacted xorganizations xand xHuman xResource xManagement x(HRM) xis xno xexception. xIn xthis xcontext, xsoftware xmanagement xis xoften xintroduced xwith xthe xrationale xthat xit xcould xoffer xbenefits xsuch xas xcost xreduction, xtime xsavings, xand xstrategic xtransformation. xMany xorganizations xhave xinvested xin xHRM xsystems xin xthe xhope xof xtransforming xthe xHuman xResource xdepartment x(HR) xinto xa xstrategically. xExtant xresearch, xhowever, xshows xthat xmany xorganizations xfail xto xachieve xintended xeffects xfrom xtheir software management xinvestments xand xas xresult xbeliefs xaround xthe xstrategic xvalue xof xHRM xvary. xThis xthesis xaims xto xcritically xexamine xthe xlink xbetween HRM xinvestments xand xstrategic xvalue. xThe xreview xfocused xon xperceptions xabout HRM xsystems xwithin xorganizations xand xsought xto xunearth xhow xperceptions xshape xthe xroute xof xsoftware xmanagement ximplementation xtowards xa xstrategy xoutcome. xOur xfindings xindicate xthat xthe xmajority xof xthe xstudies xare xnot xguided xby xa xleading xtheoretical xparadigm. xFurthermore, xstrategic xbarriers xsuch xas ximplementation xproblems xand xlimited xuse xof xthe xsystem xthat xdoes xnot xreflect xits xpotential xare xidentified xand xdiscussed. xBy xexamining xsome xcommon xfactors xthat xhave xbeen xidentified xto xshape xthe xtranslation xof xHRM xsystems xfrom xinitial xperception xto xactualized xuse xwe xlay xthe xfoundation xfor xmore xnuanced xtheorizing xof xHRM xuse xwithin xcontemporary xorganizations.**

Keywords—software management, HRM, strategy, HR

I. INTRODUCTION

In the mid-1980s, association research noticed the requirement for association change [1] to increase key favorable circumstances from software management to the board ventures. Associations moved away from the time of "best practice" and utilized software management the board to improve their association's latent capacity. For instance, researchers saw how the new period of data innovation conveyed the capability of changing hierarchical structures and standards and gave better approaches for dynamic [2]. In the expressions of Besson and Rowe (2015) "Software Management is viewed as a significant resource for utilizing association change inferable from the troublesome idea of software management the board advancements, the profound digitalization of business and their cross-association and foundational impacts, despite the measures of interests in big business frameworks." Although association change is viewed as a developing subject dispersed alongside numerous headings [3], how software management is interpreted of from beginning observation to genuine software management the board utilize that envelops vital change stays muddled [4]

The human resource (HR) office is one piece of the association that right off the bat grasped software management the executives to encourage its better than ever tasks [5]. Human resources the executives (HRM) identifies with the creation and change of HR that influence association execution through key ventures, for example, staff training and can offer a huge upper hand [6]. New software management use and related ventures conveyed the guarantees of changing the job of human resource office inside the association by giving cost decreases, enhancements overtraining and direction towards key errands [7]. Regardless of the guarantees, in any case, late examination shows that there is a minimal real proof for the related case that new software management ventures can change the job of HR office from a more utilitarian job to a key one [8]. We inspect why those frameworks regularly neglect to meet the desires for changing the HR office into a vital accomplice. While human resource the executives are introduced in the writing with a wide range of definitions, because of the multidisciplinarity of the subject Strohmeier consensually characterized HRM as "the (arranging, usage and) use of data innovation for both systems administration and supporting at any rate two individual or aggregate entertainers in their mutual performing of HR exercises". This definition focuses on that HRM is generally utilized for social occasion data about wages, oversee yearly leave, authentications and worker preparing [9] and clarifies why the majority of the investigations around HRM are centered around cost decrease and mechanization driving the vital change convictions unexplored. The writing audit is guided by a novel calculated structure that assists with recognizing in the writing ideas, for example, observations, aim, and interpretation of HRM. Specifically, those ideas have been analyzed on how they have been influenced by variables, for example, the earth, the entertainers, the innovation, and the methodology. The choice of those components intends to incorporate both the particularities of the product executives itself and the working condition in this manner permitting us to get a morefull perspective all in all circumstances and distinguish the explanations for normally recognized aftereffects of eHRM usage and use.

Our writing survey shows an absence of guessing in the key advantages of HRM accordingly the advantages are hard to be distinguished along with the way that most examinations were directed without vital premises as a top

priority. By looking at the connection between human entertainers and innovation establishment we recognized that the greater part of the investigations is concentrated around two applied classes. In the primary classification, numerous examinations have been recognized that neglect to execute the framework effectively, because of a few reasons. Though the subsequent class contains considers that present HRM in a situation that doesn't have a key job. Both of these classes suggest circumstances where the capability of the framework is hard to develop. To all the more likely untwine the capacities around HRM a superior hypothesis on key HRM is required. Taking everything into account, we contend for more observational investigations that could clarify the mind-boggling relationship between software management, and human resource management.

Practicing HRM software deal with HR accomplishments is a communal factor between prosperous corporations; there are some industries in any business that have prospered deprived of some kind of HR mechanisation in location. Mobile availability has distorted contemporary HR divisions, placing data in addition to mission organisation at the fingertips of staffs and directors. HRM has assisted to efficiently failure government and "crush" numerous corporations.

A HRMS can assist big corporations and minor start-ups upsurge their level of progress and output. The following are few instances of further profits that a corporation can observe applying a HRMS display place.

- Staffs able to deal with specific secretarial responsibilities relating to the involvement of their individual data, which places time back between of HR specialists.
- A HRMS arises through integral safety, counting verification actions that limit entrance to official handlers and keep corporation information.
- Most HRMS stages permit operators to modify their work processes to the requirements of their corporation as well as acquire the preeminent user knowledge.
- Structural heads able to organize programmed notices and emails via a HRMS, which will enable response of the communication to manage director's time search replies.

II.   RELATED RESEARCH

To comprehend the relationship between software management the executives and HRM to make a vital change of the HR office, we survey the exploration of the utilization of software management the board with regards to eHRM. In doing as such, we distinguish a few issues that warrant a methodical assessment to uncover the intricate connection between how HRM are seen and how they are at last utilized in associations. Since HRM is a multidisciplinary term this part investigates the writing on HRM and presents the exploration stream of methodology as a reciprocal wellspring of motivation. The writing had inspected how client activities influence the result of a mechanical application as are an appropriate possibility for the orderly assessment. Thus, we structure this area into two sections. In the initial segment, we analyze observations, advantages, and issues that data

frameworks cause to the HR office and keeping in mind that utilizing the procedure research we articulate a structure to address the issues distinguished as a methodical survey. The structure is centered around the connection between software management and HRM, along these lines inspects factors, for example, the job of entertainers, their activities in the individual condition, the innovation that was utilized, and the vital results.

According to Marler (2014), the primary role of the HR function is to be an administrative expert by focusing on tasks such as job tracking requisitions, employee payroll, employee training, and benefits program. During the years' management of human resources (HR) become increasingly dependent on use. Tannenbaum (2015) argues that IS used in this context involves gathering, storing, and analyzing information relevant to the management of human resources. After the widespread use of the Internet a special case of information systems in human resources emerged, named HRM. HRM is a multi-disciplinary phenomenon that is described with various definitions along with the literature. The first definition of the terms comes from Ruël et al (2015) who describe HRM as a way that organizations could implement strategies, policies, and practices using the Web. Some years later Strohmeier (2015) refines the definition of HRM as the application of software management on networking and interaction between actors on shared HR activities. In this way, software management-enabled management of human resources can be understood not only as a facilitator that automatically brings change but also as an active participant that is directly dependent on the application of software management and the relationship between software management and the organization. The literature on HRM also includes other related terms. For example, Virtual HRM describes networks of external and internal actors that offer services that replace the functionality of the HR department, Web-based HRM that connects the concept of HRM with internet-related technologies such as ERP systems, and Business-to-Employee that connects the concept to managers and HR professionals [10]. After reflecting on the different definitions of HRM we observe how the potential of technology is acknowledged, from being used as a medium that affords communication between actors, to substitute HR personnel in the execution of activities [10].

Extant research shows that the main reason for organizational use of software management in HR practice is related to time savings generated by the capacity of software management to replace lengthy work that needs the involvement of the HR personnel, with automated procedures [11]. Furthermore, HRM systems promise cost reductions [12] through better coordination and control over HR activities. In this way, the implementations of HRM systems often intend to allow HR professionals to focus on projects that create strategic value such as talent management, employee training, and development programs [9]. Similarly, HRM systems are often designed to generate and analyze data (real-time or not) that could assist and inform the development of new business strategies and practices [11]. For example, HRM systems have been used to provide performance metrics and workforce planning. Based on these observations, successful strategy implementations are commonly believed to create

improved organizational effectiveness in turn transforming the HR department from a marginal operational position to a fully-fledged strategic role [13] "The introduction of HRM into organizational life increasingly calls for an integration of diverse expertise, interdisciplinary comprehension, and modernization of the HR profession". Despite the promising outcomes concerning the use of HRM systems, little evidence has been found that supports a strong connection between HRM systems and transformation of the HR department to a strategic partner [10]. The lack of connection between HRM and the transformation of the HR department is supplemented by the findings of Marler and Fisher (2014) who argue that although the literature on HRM sounds promising no empirical evidence that describes a direct causal relation between HRM and strategic outcomes was found. Ample empirics indeed show that in many cases the HR function remains administrative and thus not participating in strategy making. In this way beliefs on the idea that software management could transform the function of HR fall short.

Several studies have sought to answer why HRM systems fail to satisfy their promises. This stream of research shows that the reasons why HRM failed to effectuate a strategic transformation of the HR department vary. For example, Dery et al (2013) argue that the reason that those systems fail to create the transformation promised is due to the over-simplistic way we approach the relationship between software manageemnt and human resource managemen, as we address software management as a force that enables change. On the contrary, we have to address software management as part of a relationship of reciprocal causality that is affected by the institutional context where software management operates. The authors have used an actor-network theory approach (ANT) and identified that implementing an information system does not have deterministic outcomes because the certain formulation of relationships between actors could affect their role.

Additionally, Parry and Tyson (2016) when examined the main goal behind the firm`s adoption of an HRM system and found that only a few aimed to increase the strategic orientation of HR through the use of an HRM. Furthermore, they failed to found compelling evidence that HR increases value by being strategic, they reason those barriers due to skill limitation on the HR team. Additionally, environmental and social factors could affect people`s interaction with technology and thus affect the results regarding the use of technology [8]. Reflecting on the reasons that affected the outcomes of those systems we identify that software management could not be seen as a factor that drives change while remains unaffected from software managements environment. Contrariwise, software management does not operate on software managements own as software management is part of a relationship where human and environmental factors shape the operation and the outcomes of software management. In our effort to identify the reasons why HRM systems do not create the strategic transformation of the HR department as promised, we focus on the complex relationship between software management and organizations.

As described before this relationship is addressed as a possible reason that affects the outcomes of those systems. To critically reflect upon the relationship between software

management and organizations we next turn to the strategy literature for inspiration. Through software managements longstanding engagement with those issues, we believe that strategy literature is a valuable asset that helps us to address the problem. For example, Orlikowski (2017) describes software management use as a process or an enactment that is both dependent on and constitutive of different structures, therefore users enact structures through interaction with the technology resulting in a situation where the potential benefits of this enactment may not be realized sometimes. How users" actions affect technological outcomes are discussed by Arvidsson et al (2014) who argue for practical alignment with strategic intent is needed to achieve a successful implementation. The connection between technology and human actor is addressed by Johnson (2015) who stress that strategy is enacted by actors that perceive, implement, and realize the strategy. By bringing views on software management and actors` actions from the literature we want to stress that those views might be suitable for the HRM literature too. In our perspective, we acknowledge that outcomes of software management systems are susceptible according to their uses, as a result, those systems are affected by factors such as the environment where they operate, the actors that operate on them, and the role that the systems have [6].

III.   ARTICLE SUMMARIES

TABLE I.   ARTICLE SUMMARIES

#	Full Reference	Main Research Question / Objectives	Main Results / Issues	Why this paper relevant	Remarks
1	A. S. Syed Navaz (2015). *Human Resource Management System*	To reduce the effort of ddministrator to keep the daily events such as attendance, projects, works, appointments, etc.	It merges HRM as a discipline and in particular its basic HR activities and processes with the software management field.	It's efficiently the HR department schedule of any type of company.	The maintenance of the project is easy.
2	Neela (2015). *The System & Development of Human Resource Management*	To identify the points distinguishing between HRM and software will also evaluate 'hard' and 'soft' approaches to HRM.	The concept of devolution of responsibility for each day human resource matters to line managers.	Research about HRM is been focused her and the extent to which various HRM strategies contribute to the organization being effective.	The overall study is relevant to the HRM and software management.
3	Corine Boon (2019). *A Systematic Review of*	To advance HRM research towards conceptual	Lack of clarity on the HRM construct at	Synergies between HRM practices in a software	Theme for this paper mainly focused on HRM

No.					
	Human Resource Management Systems and Their Software Management	clarity and construct refinement using based on software management.	different levels have hampered research progress.	management.	and software management.
4	Paul Chepkuto (2018). *Information Communication Technology And Human Resource Management In Modern Organisation*	To achieve improved efficiency and quality in HRM decision making; and software management.	HRM increases in efficiency when it comes to making decisions in HR	HRM able to transform the business unit, department and the entire organization by using software management.	This paper discussed about the HR and it components and also the software management.
5	Barkha Gupta (2016). *Human Resource Management (HM): Important Element of Current Scenario*	To know about how enhance the ability of the human resource management to leverage and absorb new and emerging opportunities and challenges in the business horizons.	Implementing an effective HRM can be sure-fire for HR to stay on the cutting edge in its bid to deliver more effective and streamlined service.	This research paper helps to know about how HRM help the organization to enhance the efficiency of work.	The overall study is relevant to the HRM and software management
6	Zubaidah Abdulhakeem Majeed (2016). *Implementation of the Human Resources Information Systems and Comparative Study of Various Platforms*	The Human Resources Management (HRM) has been aim to study.	To investigate and compare HRM based on its software management.	It reviewed the importance of Human Resources Management (HRM) and software management	This paper discussed about the HR and it components and also the software management
7	Li Ran (2017). *Design and Implementation of Human Resources Management System*	Focuses on introducing business and technical framework of human resources management and its software management.	To deliver increased performance and quality in HRM and software management.	To understand the relationship between HRM and software management.	Theme for this paper mainly focused on HRM and software management
8	Amran Rasli (2017). *The use of Human Resource Management Systems in the Saudi market*	To investigate the current situation with Human Resources (HR) systems in the Saudi market on the basis of survey conducted among 100 organizations.	Companies are satisfied with the level of HRM systems' performance.	This paper discuss about the HRM satifaction and software management to manage its database.	The research of HRM is focused around Saudi market.
9	A.S.Syed Navaz (2015). *Human Resource Management System*	To maintain efficiently the HR department schedule of any type of company.	It merges HRM as a discipline and in particular its basic HR activities and processes with the software management field.	To understand the relationship between HRM and software management.	This paper focused on the HRM system.
10	Xiaobing Zhan (2018). *The Effects on Human Resource Management System and Organizational Performance: A Role of Absorptive Capacity*	Focuses on introducing business and technical framework of human resources management and its software management.	To deliver increased performance and quality in HRM and software management.	To understand the relationship between HRM and software management.	Theme for this paper mainly focused on HRM and software management
11	Túlio Gomes Mauro (2020). *Human Resource Management as innovation for organisations*	To identify relevant aspects to achieve advantage of the innovative potential of a human resource management (HRM)	Critical aspects regarding the effective adoption of HRM were addressed.	The present study compared the HRM implementation professionals' perception of the results expected from the study.	This paper focused on the HRM system and software management.
12	Ankrah, E, Sokro (2015). *Human Resource Information As A Strategic Tool In Human Resource Management*	To identify specifically, how the use of Human Resource Information Systems (HRIS) contributes to the effectiveness of strategic human resources management.	HRM increases in efficiency when it comes to making decisions in HR	HRM able to transform the business unit, department and the entire organization by using software management.	This paper discussed about the HR and it components and also the software management.
13	Kelly O. Weeks (2016). *An Analysis Of Human Resource Manageme*	To achieve improved efficiency and quality in HRM	Critical issues regarding the effective adoption of HRM	The various HRMs discussed in this paper represent the state	This paper focused on the HRM system and

	nt Impact On Software Management	decision making; and software management.	were addressed.	of the art at this present time.	software management
14	NejibBen Moussa (2015). *The impact of HRM on individual innovation capability in Tunisian companies: The moderating role of affective commitment*	To identify the relationship between HRM and software management.	The employees are engaged affectively to their organization more the HRM impact is positive and noteworthy on individual innovation behavior of HR staff.	To integrate between HRM practices in a software management.	This research focuses on the study of the impact of the HRM' use in human resources department (HR) on individual innovation capability and software management.
15	Peter Boxall (2015). *Human Resource Management: Scope, Analysis, And Significance And It Relation To The Software Management*	To identify the relationship between HRM and software management	Critical issues regarding the effective adoption of HRM were addressed using the software management developed in the organization.	The various HRMs discussed in this paper in detail also the relationship between the software management.	This paper discussed the three scope of HRM.
16	Richard D. Johnson and Hal G. Gueutal Transforming HR Through Technology: The Use of E-HR and HRIS in Organizations	To Practice non-technical explanations once suitable. Via e-HR must be a dominant factor of an corporation's HR policy	It must not be the private result. Technology is not a spare for sound HR policy and strong employees.	To understand The Practice of E-HR and HRIS in Corporations	The study focus on E-HR plus HRIS in Corporations

IV. IMPLEMENTATION PROBLEMS

In our review we identify a strong tendency to focus on the human side, many studies have used techniques such as Technology Acceptance Model (TAM) and Resource-Based View (RBV) to understand the implications that the system imposed to users. Several concepts were identified such as perceived usefulness, ease of use, lack of skills, and fear of change which were possible drivers that could judge whether the system succeeds or not from a human perspective. By no means, we ignore the importance of human acceptance of technology, as it is a major part of the whole project neither we want to end up to a strict deterministic approach where technology is the only origin of consequence. We argue however that it would be useful to have an understanding a step further down the road and examine how human actions affected their initial perceptions on HRM and if those actions where barriers or drivers to strategic outcomes. After reading the literature on HRM systems a disconnection between system perceptions and system use was evident. People were reviewed as recipients of technology and not as users that they seek certain actions to use technology in a way that it will fulfill their promises. This comes in line with the implementation approach that was evident in many cases. Besides the human element, we have seen that the environment also played a significant role that affected the implementation process [14]. Different environments apply different norms, legislations, and cultures and thus have different consequences. Furthermore, factors such as local language and trade unions must be taken under consideration as they impose additional particularities.

V. RELATIONSHIP BETWEEN SOFTWARE MANAGEMENT AND HUMAN RESOURCE MANAGEMENT

Although most of the studies focused on the implementation process and did not discuss specifications of the technology used, some studies identified that it is important to design eHRM from the beginning with strategic considerations, as it may be difficult and costly to make changes afterward. Some authors suggested that for the HR department to be strategic it must be aligned with other strategic business units [10]. These views are in line with the strategic value of information systems in the literature [15]. When examining the benefits of HRM many studies have acknowledged either cost-saving or modernization of the HR department. Therefore, we believe that there is a gap in the role of technology. Most studies had beneficial promises for HRM although the connection of technology with organizations practices, from a perspective of change, was a week. To some extend this was due to the vague relationship between theory of HRM and its practice. By no means, we have found strong evidence that the use of an HRM system could be made the HR department strategic but it was prominent that for HRM to be strategic it must be used with a strategic intention. Many of the cases revealed that the systems were used without strategic purposes but rather as tools that could provide automation and cost savings, therefore eliminating any possibility for strategic benefits. Additionally, if the HRM was applied in an environment where the HR department already played a strategic role then it could only give more benefits with the technological capabilities that could provide [16]. Therefore, we recognize that theory on HRM needs further development for us to understand how the space for strategic benefits of the system could be created. Furthermore, no connection was found between strategic perceptions and strategic outcomes. In literature, there are strong recommendations of how strategic intention could be shaped from users' practice, but in our case, no such actions were identified. As a result, further exploration is needed to connect the procedure between technology perception the practice of technology and strategic outcome. We perceive that the literature on HRM acknowledges that the relationship between software management and human resource management is affected by several factors, but it does not progress the discourse further to identify how this relationship could create the strategic outcomes of HRM.

VI. IMPLICATION FOR RESEARCH

The field of strategic HR is new and the studies are focusing on the implications and the benefits of an HRM too, therefore this review aims to provide results with an improvement character that could help researchers to progress forward. More specifically the need for a theory that conceptualizes the strategic intent of HRM is urgent together with studies that focus on the role of technology in an organizational transformation which is examined under a strategic realization. Implementation problems and the context of the operation of HRM systems were the two main conceptual categories that emerged, therefore research has to address those categories as possible reasons that could hide the transformation effects of HRM. Additionally, the relationship between software management and human factors needs further exploration as the human factor is perceived as a recipient of technology and not as an agent whose actions produce different results. Additionally, this study aims to contribute to the novel area of HRM by addressing how technology is perceived, the types of strategic intent that are formed, and how those intents have or have not been translated to practice.

VII.   LIMITATIONS

It is important to know that this thesis has several limitations also as it encountered a novel research branch where the theory behind the strategic promises of HRM is not have grown. Moreover, the structure that was used could suffer from a high degree of subjectivity in terms of grouping the data, together with the fact that it did not take into consideration different levels of analysis that happened in the framework that could provide further findings. Finally, a literature review is a skillful task that is affected to a certain degree from the author`s experience. These limitations by no means call into question the findings of this thesis but recognize the situation under which the study was conducted.

VIII.   CONCLUSION

To understand the reasons why HRM fails to succeed in its strategic promises we conducted a literature review that examined the current perceptions around HRM while bringing in the discourse the strategy literature as a source of inspiration. After using a theoretical framework, we identified that HRM literature lacks theoretical direction on the strategic benefits of HRM, therefore we argue for the need of a theory that explains how HRM could achieve the strategic transformation that was promised. Since this field is not well developed theoretically, we concluded that further studies are needed to address the current problems. We believe that HRM literature could look at the strategy literature where is stressed that the relationship between software management and organization is not fixed and therefore is directly connected with the practice of technology. Additionally, we have seen that the implementation process suffers many problems that are caused by technological and environmental particularities. Therefore, those issues have to be addressed first to see the benefits of an HRM.

To understand the relationship between people and technology we suggest to researchers to follow a moderate deterministic approach that is focused on both technology and human. We propose a research direction where the role of technology will be examined more and thus unfold its true potential. More specifically we propose to investigate the activities that an HRM will contain, activities which must be defined following suggestions from the HR department. Bringing the HR department on the design table not only could provide the expertise needed for the specific tasks, but also could improve the strategic position of the department in the organization. Furthermore, we propose more studies that examine people`s actions to investigate how we progress from strategic intent to strategic use of a system. Using an HRM alone could not shift the HR department to a strategic direction, as this is the case for all information systems. What is important though is to reconstruct the processes of both the HR department and the organization and to position the HRM in those processes. Our understanding is that eHRM`s potential to introduce strategic benefits to HR is hidden behind implementation problems or a context that it does not allow its full potential, therefore we stress that this field needs further exploration.

Human resource information structures have intensely changed exactly how HR facilities are carried and accomplished via corporations. Practiced efficiently, HRIS able to make HR employee well-organized, well knowledgeable as well as more capable to connect in what way they increase significance to the trade. As the study indications, corporations that link actual HR management procedures through actual HR skill are possible to be further creative as well as extra cost-effective than persons that do not. Obviously, the experiment for HR managers is to run this expertise to increase the profits whereas diminishing the drawbacks all the way.

Enhancing your consequences while applying HRIS in E-HR

✓ Reshape and rationalise HR procedures once executing e-HR tackles. Think of, e-HR is an influential method to achieve an HR plan, nevertheless in in addition to of itself, e-HR is not an HR plan.

✓ Mechanise main HR managerial jobs as well as practise the HRIS to backup administrative policymaking.

REFERENCES

[1] A. Pettigrew, " Context and action in the transformation of the firm," *Journal of Management Studies* , vol. 24, no. 6, pp. 649-670, 2015.

[2] M. D. Hopper, "Rattling SABRE--New Ways to Compete on Information," *Harvard Business Review,* vol. 68, no. 3, pp. 118-125, 2016.

[3] J. V. N. Henderson, "Strategic alignment: leveraging information technology for transforming organizations," *IBM Systems Journal,* vol. 32, no. 1, pp. 4-16, 2017.

[4] W. J. &. S. S. V. Orlikowski, "Using technology and constituting structures: A practice lens for studying technology in organizations," *Organization science,* vol. 11, no. 4, pp. 404-428, 2014.

[5] S. Strohmeier, "Concepts of HRM consequences: a categorisation, review and suggestion," *The International Journal of Human Resource Management,* vol. 20, no. 3, pp. 528-543, 2015.

[6] D. &. N. S. Grant, "Realizing the strategic potential of HRM," *The Journal of Strategic Information Systems,* vol. 22, no. 3, pp. 187-192, 2014.

[7]   D. P. &. S. S. A. Lepak, "Virtual HR: Strategic human resource management in the 21st century," *Human resource management review,* vol. 8, no. 3, pp. 215-234, 2016.

[8]   J. H. Marler, " Making human resources strategic by going to the net: reality or myth?.," *The International Journal of Human Resource Management,* vol. 20, no. 3, pp. 515-527, 2017.

[9]   K. H. R. W. N. &. W. S. Dery, "Lost in translation? An actor-network approach to HRIS implementation," *The Journal of Strategic Information Systems,* vol. 22, no. 3, pp. 225-237, 2015.

[10] S. Strohmeier, "Research in HRM: Review and implications. Human resource management review,," *Research in HRM: Review and implications. Human resource management review,,* vol. 17, no. 1, pp. 19-37, 2016.

[11] E. E. &. M. S. A. Lawler, "HR as a strategic partner: What does it take to make it happen?," *Human Resource Planning,* vol. 26, no. 3, pp. 15-29, 2015.

[12] J. J. G. &. B. D. Hannon, " Human resource information systems: operational issues and strategic considerations in a global environment," *International Journal of Human Resource Management,* vol. 7, no. 1, pp. 245-269, 2017.

[13] H. J. M. Ruël, Electronic HRM in theory and practice, Emerald Group Publishing, 2016.

[14] G. &. R. M. Martin, " Theorizing of strategic HRM: a model, case illustration and reflections," *The International Journal of Human Resource Management,* vol. 21, no. 10, pp. 1553-1557, 2015.

[15] M. P. &. T. Chen.DD, "Information systems strategy: reconceptualization, measurement, and implications," *Information systems strategy: reconceptualization, measurement, and implications,* vol. 34, no. 2, pp. 223-259, 2016.

[16] T. R. H. Bondarouk, "Human Resource Management," *International Journal of Human Resource Management,* vol. 20, no. 3, pp. 505-514, 2016.