

Adoption of HRIS in the Public Organizations: Institutional Logics Perspective

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This study explored the adoption, benefits, and challenges of HRIS in a public organization in Pakistan. Using the case study approach, qualitative data was collected through in-depth interviews at various levels in a hierarchy. The study found that the organization could not achieve the benefits of HRIS as established in the literature. The adoption of HRIS remained quite slow and resulted in parallel systems (manual and automated) in the organization. In light of institutional logics perspective, the organization is struggling with contradictory pressures from the new logic of HRIS and the previous logic of manual HR system, which is costly for the organization. Out of various barriers identified, in the adoption of HRIS, the most crucial are lack of top management support and less technical knowledge to use the new system. The findings implied that mere adoption of HRIS could not produce the desired results until serious efforts were made for its successful implementation.

Keywords: Human resources; Information system; Institutional logics; NPM reforms; public organizations.

INTRODUCTION

In the contemporary knowledge-based economy, the importance of human resource management cannot be denied, where creative and innovative solutions are only possible through the expertise and ideas of employees (Meditheti, & Gomes, 2017). Hence, effective use of the workforce is the most crucial task in



organizations (Mbugua, 2015). With this realization, the role of HR is shifting from operational activities to a strategic partnership in the organization with more focus of HR on analysis and decision-making (Batoool, Sajjid & Raza, 2012). For this purpose, HR managers need more efficient systems of data storage, data management, and data analytics. These systems can help HR managers to play an effective part in facilitating strategic, decision making in the organization. In this effort, the adoption of automatic and integrated human resource management systems can greatly benefit organizations (David, Shukla & Gupta, 2015). Human resource information system (HRIS) is one of the widely used and highly beneficial software for the automation and integration of HR data. With a systematic procedure and function to acquire, store, manipulate, retrieve, analyze and disseminate information related to the human assets in an organization, HRIS can significantly contribute to the strategic decision and efficiency of the organization (Troshani, Jerram & Hill, 2011).

With the visible and successful use of HRIS in the private sector (Brown, 2002) the public sector organizations are also adopting this trend, particularly under the influence of new public management (NPM) reforms. The NPM reformers have emphasized to inculcate performance-based and result oriented corporate management culture in the public sector (Osborne & Gaebler, 1992). NPM reforms got global acceptance after the 1980s whereby governments, in both developed and developing countries, encouraged public organizations to emulate private sector management techniques to become dynamic, efficient and productive (Hood, 1991). The adoption of HRIS holds considerable promise for the advancement of the HR function and is a proven successful system in the private sector (Troshani, Jerram & Hill, 2011). However, the adoption of the private sector HRM practices in the public sector is not without challenge due to contextual differences in the public and private sectors (Naveed & Jadoon, 2014). Notably, the presence of centralizing tendency, hierarchical control, and lack of autonomy are well documented in the public sector of Pakistan (Naveed, et al. 2018). With these contextual factors, the adoption of HRIS can be a challenge to public organizations. Hence this adoption raises several questions that require empirical evidences:

- What challenges are faced by public organizations in the implementation of HRIS?
- What benefits are achieved due to the implementation of HRIS in public organizations?

- How has the previous system improved/deteriorated with this change and what are the impacts?

There is a dearth of literature addressing the above-raised questions. Especially the challenges faced by the public organizations to successfully adopt HRIS need researcher's attention for important reasons. First, the focus of HRIS literature has remained more on theoretical studies whereas empirical research received less attention (Ngai & Wat, 2006). Secondly, the majority of the HRIS literature is available in the context of developed countries and the private sector. Adoption of HRIS and the challenges encountered in modernizing HRM in the public sector is under-researched (Matimbwa & Masu, 2019; Perry, 2010). Moreover, the studies on the adoption of other information technologies in the public sector show that public organizations face challenges and issues that can hinder the adaptability of private sector practices in their unique context (Haeruddin & Maulana, 2017; Troshani, Jerram & Hill, 2011). These results further raise the need to study the impacts of an adoption of HRIS in the public sector.

Addressing these critical gaps in the literature, this study aims to explore the adoption of HRIS in public organizations while examining its uses, benefits and barriers. For this purpose, a case study research design is adopted taking Lahore Electricity Supply Company (LESCO) as a unit of analysis in the context of the public sector in Pakistan. Following are the objectives of this study:

Research Objectives

- To explore the adoption of the HRIS in public sector organizations in Pakistan.
- To explore the uses and benefits of adoption of the HRIS system in Public sector organizations in Pakistan.
- To identify the barriers to the adoption of HRIS system in public sector organizations in Pakistan.
- To theoretically explain the adoption of HRIS in public sector organizations in light of institutional logics perspective.

This paper is arranged into five sections. Section I provides the introduction of the study. Section II reviews literature concerning NPM reforms in the public sector; stages of adoption of HRIS and benefits and barriers in the adoption of HRIS. Section III elaborates the methodology of the study followed by findings and discussion in Section IV and Section V respectively. Finally, a conclusion and recommendations are provided.

LITERATURE REVIEW

Benefits of HRIS

HRIS is considered as a transformation of human resource management in the contemporary knowledge- based and technology- driven economy. Lengnick-Hall and Moritz (2003) assert that HRIS creates informational efficiencies and cost saving to enhance the performance of human resource management. Furthermore, it enables timely access to accurate data for strategic change and decision-making. Additionally, scholars have claimed several organizational level benefits of implementation of HRIS such as increased shareholder's value (Brown, 2002); increased return on investment and productivity (Mayfield, Mayfield and Lunce, 2003); increased efficiency and organizational value (Bal et al., 2012)

The study of Manivannan and Jayasakthivel (2016) empirically verified that implementation of HRIS resulted in reduced paperwork, improvement in data control, reduced work force, and quick access to information. Likewise, Ahmer (2013) found that the adoption of HRIS resulted in cost saving and efficient information access in Pakistani organizations. Bankar and Kakade (2017) reported operational efficiency in auto-mobile industry due to implementation of HRIS. Major benefits of adoption of HRIS, in the extant literature, include efficient use of HR information, reduced work- force, the effectiveness of human resource process and improved strategic decisions (Parry & Olivas, 2011; Aggarwal & Kapoor, 2012; Maditheti & Gomes , 2017). These benefits enable the HR department to shift its focus from operational to strategic role in the organization (Dmour, Obeidat, Masa'deh, & Almajali, 2015).

Barriers and Challenges of HRIS

However, the benefits of HRIS can be availed only with its successful implementation, which is quite a challenging domain (Ruel, Bondarouk and Looise, 2004). There are several barriers found in the adoption of HRIS in the organization. Ferdous, Chowdhury, and Bhuiyan (2015) found that management reluctance, organizational internal resistance, and conversion cost could impede the effective adoption of HRIS. Yang, Lee, and Lee (2007) theoretically explained three significant challenges faced by the organization in the adoption of HRIS. Firstly, lack of resources and funds impeded a fully implemented, upgraded and workable HRIS system. Secondly, the complexities associated with HRIS had often been under-



valued in terms of its impact on behaviour and processes of the organization. Thirdly, the end-users presented great resistance to accept change from manual to an automated system.

Williams, Onsmann and Brown (2010) emphasize that the company's culture and values play an important role in the success or failure of the adoption of HRIS. Organizations that value flexibility, freedom, cooperation, innovativeness are more adaptable to HRIS while organizations that value rigidity, centralization, rule-oriented are less adaptable to the implementation of HRIS. Another important and unique issue, highlighted in the literature, is security reasons that create resistance. An organization has much confidential data and disclosure and its possible during the implementation of HRIS system in the organization (Bal, Bozkurt & Ertemsir, 2012). Additionally, top management's support has been identified as a critical factor for the success of HRIS (Maditheti & Gomes, 2017). Various barriers to successful adoption of HRIS can be summed up due to the lack of communication, short-term value analysis, failure to implement right decisions at the right time, less trained staff, resistance from end-users, the time taken and expertise required to implement changes required by each department and lack of IT support (Delorme & Arcand, 2010).

Adoption of HRIS

Scholars have argued that there are three major phases of adoption of HRIS: operational, relational and transformational (Kovach & Cathcart, 1999; Snell, Stueber, & Lepak, 2002; Shrivastava & Shaw, 2003). The first phase is the operational impacts of HRIS that includes automation of day to day activities, reducing cost, enhancing the productivity of internal function of HR. The second phase is the relational outcomes of HRIS that comprises of HR database management, access to information by managers and employees' reduced response time and improved service delivery. The third phase is the transformation that is the integration of all the functions of human resource management to provide better decision making and strategic outcomes (Reddick, 2008). These phases in HRIS are presented in figure 1.

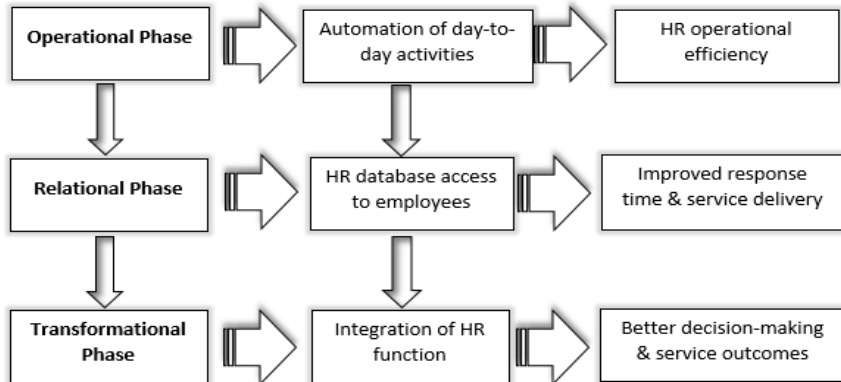


Figure 1. Three phases of Adoption of HRIS

Figure 1 presents the three phases of the adoption of HRIS. It is argued that strategic outcomes of HRIS are achieved only after the implementation of the third stage of HRIS (Snell, Stueber, & Lepak, 2001). The first two phases can only provide operational efficiency whereas, all the three phases are important to achieve the real benefits of HRIS. Furthermore, it is found that so far only large companies have been able to implement the HRIS system in all three phases. On the other hand, smaller companies have achieved only the operational and relational aspects and failed to implement the strategic aspects (Ruël, Magalhães & Chiemek, 2011). Additionally, it is found that HRIS technologies are used mainly for administrative purposes rather than for strategic decision-making (Burbach & Dundon, 2005).

Adoption of HRIS in the Public Sector

In the context of the public sector, the adoption of HRIS has been popularized under the famous new public management (NPM) reforms. NPM reformers presented the idea of reinvention of government through inculcating business-like practices in the public sector to deal with its inefficiencies (Hood, 1991; Osborne & Gaebler, 1992). These reforms were initiated in Anglo- Saxon countries and were followed widely across the globe. In the case of developing countries, the NPM trend was majorly introduced by the international donors.

Under NPM reforms, public organizations are reinventing their traditional personnel administration system into modern HRM functions and SHRM orientation (McCourt & Ramguttty-Wong, 2003). HRIS is majorly adopted as a private sector successful practice to reinvent the HR functions of public organizations



(Hendrickson, 2004). However, the adoptability of the private sector practices is quite challenging for public organizations due to contextual differences (Naveed & Jadoon, 2014). In particular, the centralizing tendency in decision-making, rigid regulations and, the already prevailing personnel practices can hinder the successful adoption of HRIS in public organizations.

For explaining the adaptability of HRIS, in public organizations, the institutional logics perspective provides an essential theoretical basis. Institutional logic comprises of a set of assumptions, values and beliefs that provide guiding principles and practices for action. Organizations have to respond to these institutional demands to gain legitimacy from important referent audiences (Greenwood et al., 2011). The early scholars of institutional theory argued that organizations replace the existing systems with the new institutional demands under the phenomenon of rationalized myths which makes the organizations similar to each other (DiMaggio & Powell, 1983). Later it was realized that, organizations are faced with multiple institutional contexts and that they present separate rationalized myths which organization has to incorporate. Friedland & Alford (1991) theorized that various institutions operate at different levels and each institution presents different demands to the organizations.

With this realization, the institutional logics perspective argues that organizations are faced with different institutional demands from a variety of institutional logics at the same time, which present conflicting situations for the organizations (Thornton & Ocasio, 1999). To cope with such conflicting situations is quite challenging for the organizations and hence generates different responses. Scholars argued that organizations are not passive recipients of institutional pressures rather they interpret, decode and actively transform logics. In this respect, Oliver (1991) theorized a broad range of strategic responses available to an organization to respond to institutional pressures. It is argued that the incoming logic may not replace the old logic; rather both may co-exist in the organization or may result in new hybrid practices (Berg & Pinheiro, 2016).

METHODOLOGY

This research study used a case study research design taking LESCO as the unit of analysis. The qualitative approach was adopted and in-depth interviews were conducted. The case study was the most suitable research design because the study required an in-depth analysis of the phenomenon remaining in real-life context. Moreover, qualitative data was required for detailed exploration from

multiple perspectives. The data was useful in getting the experience of employees in the adoption of the HRIS system in the organization. A purposive sampling technique was used, and respondents were selected by pre-determined criteria. The qualifying criteria for selecting a respondent included five years of experience in the organization and involvement in implementation of HRIS at LESCO. Total eleven in-depth interviews were conducted with the HR head, administration and IT staff who implemented the HRIS system at LESCO. Moreover, the views of managers in other departments and employees were also captured because they were the major stakeholders of the system. The perspective within the HR department was triangulated with the perspective outside the HR department for data validation.

Table 1

Data validity and data reliability measures used in the study

Quality tests	Tactics used by the researcher
Construct Validity	<ul style="list-style-type: none"> ✓ An Interview guide was prepared with the operationalization of the three stages of HRIS. ✓ Chain of evidence used through triangulation of multiple sources of data (interviews on various levels in hierarchy, policy documents) ✓ Interview guides were reviewed by key informants in the field for validation purpose ✓ Patterns and codes were verified from respondents
Internal Validity	<ul style="list-style-type: none"> ✓ Pattern matching ✓ field notes and memos were maintained with transcriptions ✓ Cross verification of emerging patterns from diverse respondents (within the HR department and outside HR department) ✓ Explanation building
External Validity	<ul style="list-style-type: none"> ✓ Care in selection of case ✓ Use of theory (institutional logics perspective) for analytic generalization
Reliability	<ul style="list-style-type: none"> ✓ Development of Case study protocol (including interview guides; informed consents; detailed documentation of data collection rules and procedures) ✓ Careful storage of case study database. ✓ detailed memos and field notes



Moreover, after every interview, oral de-briefing was provided for validation. The duration of each interview was 50-60 minutes, and all the interviews were recorded. The study used Yin's (2003) data quality checks for data validity and data reliability. Table 1 provides the detail.

For ethical considerations, an authority letter was sent and approval was obtained from the competent authority. Through the consent form, respondents were formally informed about the purpose of the study, and the respondent's voluntary agreement was obtained to participate in the study. Moreover, their identity was kept anonymous. The respondents were also informed that all information acquired would be kept completely confidential and utilized solely for academic study.

The data responses were collected, transcribed and then analyzed. NVivo-11 software was used for data analysis. Thematic analysis was performed by generating second cycle codes and themes. Initially, first cycle coding was performed and the second cycle of coding. First cycle coding included both etic and emic codes. Etic codes were fetched by the researcher and reflected in the interview guide, based on theoretical constructs employed in the study. Initial coding was done using etic coding as a starting point. Additionally, emic codes were added to the etic codes as the transcriptions were explored. As the analysis continued from one transcription to the next, the list grew longer. The purpose of the first cycle of coding was data exploration through fracturing and splitting it into parts. Later, second cycle codes were generated to reorganize the etic and emic codes into meaningful categories by merging the similar ideas through pattern matching and chain of evidence. The categories were further merged into major themes. The codes and themes were discussed with the respondents and were verified.

With the help of these themes and codes, logical inferences were developed from which interpretation and explanations were extracted that made sense. A sample coding process is provided in Figure 2 that explains the coding process of the contrasting views of employees and top management on the benefits of HRIS.

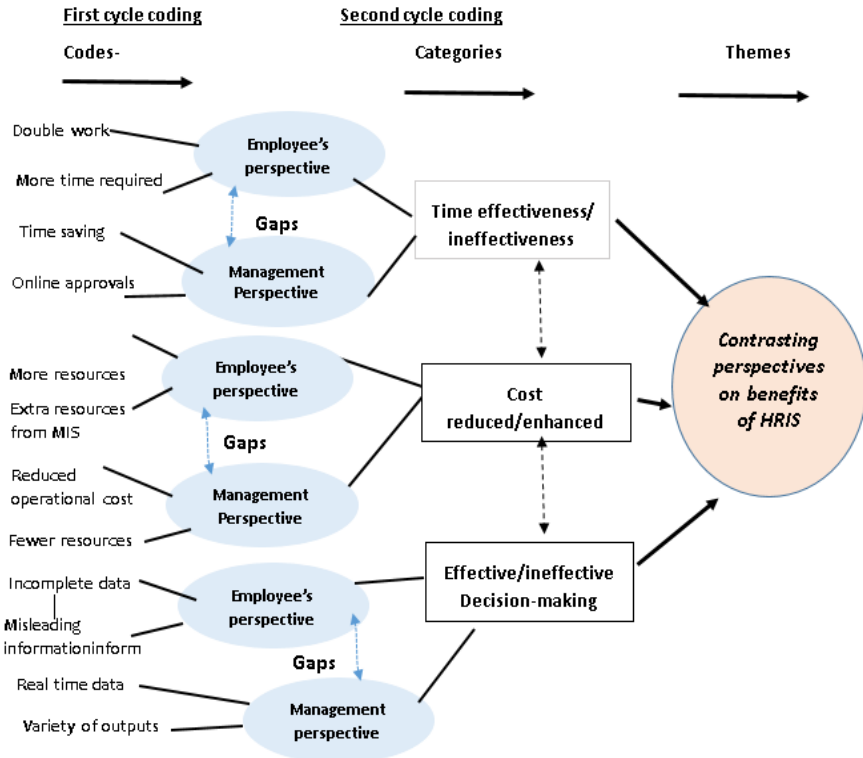


Figure 2. Coding process of contrasting views on benefits of HRIS

RESULTS

Data is analyzed under the following themes addressing the research objectives: The adoption of HRIS in LESCO; the benefits of HRIS achieved by LESCO and the challenges faced by LESCO in the adoption of HRIS. The findings are explained in light of the institutional logics perspective.

Adoption of HRIS in LESCO

Adoption of HRIS in LESCO is determined regarding three phases of adoption of HRIS (Operational, relational and transformational). Table 2 presents the views of the respondent regarding an adoption of HRIS for operational, relational and transformational phases.



Table 2

Adoption of HRIS in LESCO

<i>Operational stage: Largely achieved</i>	<i>"We have data of all employees with their information about an entry in the organization, salary, promotion and everything." "The systems are GO LIVE. Data is updated with the day-to-day activities."</i>
<i>Relational stage: Achieved to some extent</i>	<i>"All the process like recruitment, selection, payroll and leave process are automated. Every employee can log in to their portal and easily update their information" "Up to middle level, people will use computers, but the higher level managers do not work on their systems"</i>
<i>Transformational stage: Not achieved</i>	<i>"If we talk about integration, then I must say that HRIS is not implemented in LESCO yet. All the processes which are currently in running condition are working in isolation"</i>

Operational phase

Data revealed that LESCO has achieved the automation of day-to-day HR activities as indicated in the following excerpts:

We have data of all employees with their information about an entry in the organization, salary, promotion and everything.

A respondent explained that the database of HR is automated; computers are connected to the system and data can be accessed even on their mobiles.

All computers are connected to the system...We have computers and laptops and are even connected to mobile. However, it is only accessible within the organization not from home. However, we have to do file work due to the requirement of the organization.

The above excerpts indicate that the operational stage of HRIS is achieved largely. However, the previous system is also in use. Moreover, the system is operational within the organization. Employees cannot access it from home or some other place. However, some records still need to be updated as pointed out by one of the respondents:



Every new employee's information is updated; however data of previous employees requires time. In LESCO, data is not very up-to-dated as there are so many employees.

Due to these raised points, it can be inferred that the operational stage although achieved largely, however, further efforts are required to fully reach this phase of HRIS adoption.

Relational phase

The HR and MIS departments, in LESCO, are putting their efforts towards implementation of the relational stage in which the HR database will be available to managers and all employees. Moreover, managers and employees will be using it to process HR functions online. In this regard, the basic achievement (on which major work is finalized) is the access to data by employees as reported by a respondent:

All the process like recruitment, selection, payroll and leave process are automated. Every employee can log in to their portal and easily update their information such as application for leave or personal information...

This excerpt indicates that data is available to managers and employees on the employee portal and various day-to-day activities can be performed online. Furthermore, the HRIS system also provides all the information to every employee through a connected system. However, it is also reported that the end-users are reluctant to use this system. The respondent from the MIS department explained that employees are less competent to use the system themselves. Therefore, a focal person (from the MIS department) is assigned to each department for data entry and use of the system. However, to fully reach the relational stage, end-users need to use the system themselves. Until LESCO puts serious efforts into this, the system will remain limited to data entry by focal purpose. Using focal persons means the use of extra resources instead of a decrease in human resources. It also points out that use of HRIS is costly for the organization due to the use of parallel systems for the same purpose. The previous manual file processing system is still in the use and side by side, LESCO is using HRIS for data maintenance purposes. Hence, the data is being entered in both manual files and online database as indicated in the following excerpts:

Both manual and automation are going side by side. The data is used within the organization although it is linked with internet mostly used as an intranet.

Transformational phase

The transformational phase is reached when various HR functions are integrated and the HRIS system is fully utilized for decision-making purposes and strategic outcomes. Recruitment, selection, training, payroll and performance management must be integrated and updated for better decisions. Data indicates that LESCO is far away to reach this phase. Following excerpts are the evidence that data is not integrated with other departments:

If we talk about integration, then I must say that HRIS is not implemented in LESCO yet. All the processes, which are currently in running condition, are working in isolation...If I enter some update in the record, its effects should automatically update in concerned department. However, this is not the case. What happens, I run my process separately, then take a printout sheet, and send it to the concerned department and then they (make an entry) record it in their system. If we talk in this way, then our three processes are running successfully (in isolation) rent roll, payroll, and house acquisition.

“Integration is to be done with other departments.”

Furthermore, the evidence is found that the system is not used for decision-making purpose. Top management is more comfortable to make decisions using manual files. A respondent said,

Even if I have all data available in the system, I know, whenever I have to make a case, I have to note down the points manually on the case before I send it upper in the hierarchy. We are in this practice for years.

Following is another powerful excerpt that presents the reality of HRIS in LESCO:

Our seniors are not comfortable with computers. They demand manual work/ hard copies and online data update simultaneously.

Up to middle level, people will use computers, but the higher level managers do not work on their systems... moreover, all the approvals are to be made by higher-level managers. If they will not open their systems for approvals, how can ERP work...? The system gets stuck on their approval. Again, they ask to make note manually and send it for approval. In this way, both systems are running side by side.

The above excerpts indicate that the HR data is not integrated with various departments. Furthermore, HRIS is not being used for decision-making purposes. Rather, there is strong resistance from higher management for the use of new system. Hence, from the analysis of the data, it is widely indicated that so far LESCO has reached the operational stage of the adoption of HRIS largely. The relational stage is also reached to some extent; however, the transformational stage is yet to achieve.

Challenges in the implementation of HRIS

There were several challenges and barriers identified by the interviews during the implementation of HRIS. Table 3 summarizes the themes generated on the challenges faced by LESCO in adoption of HRIS.

Table 3

Challenges in Implementation of HRIS

<i>Lack of vision and support from top management</i>	<i>“Up to middle level, people will use computers, but the higher level managers do not work on their systems... moreover, all the approvals are to be made by higher-level managers. If they will not open their systems for approvals, how can ERP work.... The system gets stuck on their approval. Again they ask to make note manually and send it for approval. In this way, both systems are running side by side”.</i>
<i>Organizational culture and internal resistance</i>	<i>“Even if I have all data available in the system, I know, whenever I have to make a case, I have to note down the points manually on the case before I send it upper in the hierarchy. We are in this practice for years”.</i>
<i>Lack of commitment</i>	<i>“Our organization provide training to the employees and make them competent in using the system. However, once they are trained, they switch to another organization who pay them better. This creates a huge problem in implementation as it takes time to train new employees.”</i>
<i>Lack of technical knowledge</i>	<i>“HRIS is a new system in the market, and due to a complex structure of public sector organization it requires a highly proficient person. One of the problems is lack of trained staff available to use the system. If organization outsource it, then it becomes costly.”</i>
<i>Lack of updated information</i>	<i>“Every new employee information is updated. However, data of previous employees require time. In LESCO, data is not very up-to-date as there are so many employees.”</i>

Lack of vision and support from top management

The purpose of the implementation of HRIS in the organization is to improve coordination and develop an integrated network for open communication. It is also implemented to increase efficiency; however, in public sector organizations, a new change is implemented just to apply private sector concepts in the public sector or due to the sponsorship/funding from the government to adopt a change. One of the respondents explains it:

First of all management should have the vision to see what is the current state of the company and where they want it to be. Accordingly, they have to plan change implementation in the whole organization. However, unfortunately, such vision is rare in public sector. There is no groundwork, feasibility study, organization diagnostics.... Calculating current state, finding the gap between current state and desired state and developing a strategy for how to bring change.... Such studies are not done. Mostly, what happens is that organization gets funding for such projects and initiates it without any homework.

Organizational culture and internal resistance

Respondent highlighted that internal resistance to change is one of the major factors due to which HRIS is not adopted successfully in LESCO as indicated in the following excerpts:

Major factors that create hindrance are lack of dedication and commitment, resistance to change, we have to come out of comfort zone and power orientation.

This excerpt indicates the existing culture of the organization is a major hindrance towards the adoption of a new system. Due to the strong culture of manual work processes, there is strong internal resistance towards change. Moreover, employees have the fear of job security as well. Due to the implementation of HRIS, less staff is required. For this reason, employees create resistance in the implementation of the automated system. Respondent elaborated that:

After implementation of HRIS, the system becomes automated and reduces the number of people required for manual jobs. Therefore, employees resist this change. They have the fear that their work will be redundant with the adoption of HRIS.

Such resistance is not limited to middle or lower- level employees, however upper hierarchy is also reluctant to use the new system and is still making decisions with the traditional file processing style as indicated in the excerpt:

Whenever I have to make a case, I have to note down the points manually on the case before I send it upper in the hierarchy. We are in this practice for years ... ten twenty years... our seniors are not comfortable with computers. They demand manual work and hard copies simultaneously.

This excerpt also highlights that organizational culture and work habits are important factors that are presenting resistance to change. Managers are more comfortable with the previous manual system. They do not want to come out of their comfort zone. In other words, the habits of the manual filing process are so ingrained in the LESCO that the new system could not take its roots even after a decade of effort. The following excerpt thoroughly explains this phenomenon:

Yes, the process speed is reduced. However, I must say that we are habitual of file work. Moreover, we have to work on immediate orders... when there is an immediate order, and then I cannot rely on this system. I have to make manual file immediately and send it above.... We are running Double system ... my seniors ask me to go for both systems... how it is possible that my team do manual entry first and then do it in computers.... Then give me resources for both manual and automated work.

Lack of commitment

The findings show that there is a lack of commitment of employees to the organization. The organization provides training to the staff, and once they become competent, they leave. It creates a problem for the hindrance in the implementation of the system. HRIS is a complex system, and it takes time to implement the system efficiently. When an employee who becomes efficient leaves the organization that creates a huge problem. One of the respondents expressed that:

Our organization provides updated training to the employees and makes them competent in using the system. However, once they are trained, they switch to another organization that pays them better. This creates a huge problem in implementation as it takes time to train new employees.

Lack of technical knowledge

Another challenge identified in the implementation of the HRIS system is a lack of technical knowledge. HRIS is technical and complex software, and it requires competency to use and maintain. However, very few people are competent to use this software, and those who use it efficiently demand high cost. Respondent elaborated that:

HRIS is a new system in the market, and due to a complex structure of public sector organization, it requires a highly proficient person. One of the problems is lack of trained staff available to use the system. If organization outsources it, then it becomes costly.

Due to less trained staff, only a few people are responsible for updating and reporting the information as shared by the respondent:

Only authorized person has the password who can update and modify the data. He is responsible for updating it regularly. Every Executive director has its password. But not everyone can do it.

It indicates that the system is not widely used rather end-users are depended on the authorized persons to update their information. It also indicates the delays in the updated information.

Lack of updated information

The HRIS system is new at LESCO therefore not all information is updated. LESCO is a large company with 1000's employees. Therefore, it will require time to update data of all employees as elaborated by one of the respondents:

Every new employee's information is updated. However, data of previous employees requires time. In LESCO, data is not very up-to-dated as there are so many employees.

The system takes longer to implement as people in HR switch frequently. It requires time for a trained new person to update information and use it effectively.

Benefits and uses of Adoption of HRIS

Data was collected from diverse stakeholders of HRIS including top management, HR departments, line managers (departments other than HR



department), and employees. Their perspectives were triangulated to explore reality.

Regarding the benefits of the adoption of HRIS, respondents have provided quite diverse perspectives. Notably, differences are found in the responses from HR, MIS, and other departments outside HR departments. According to the HR and MIS department, HRIS has resulted in various benefits including reduced paperwork, increased efficiency, time-saving, cost-saving, and improved decision making. Whereas managers in other departments have seldom reported, any benefits achieved from HRIS. Instead, they have reported that HRIS is a costly and time-consuming system whereby their efforts doubled because they are expected to perform HR- related jobs manually as well as on systems. Hence, instead of a decrease in resources, HRIS has increased resources, which are competent in data entry in HRIS. HR and other departments are provided with extra resources (in form of focal persons from the MIS department) who enter data on behalf of managers and business users to update the system. Therefore, the system is costly. Furthermore, the system has remained costly for LESCO because of costly vendors and the prolonged process of implementation. It was started in the year 2007, and even after a decade, it is not entirely operationalised. During this extended period, various vendors were changed, and each vendor was charged heavily from the company. The following excerpt provides evidence of the costly and slow process of adoption of HRIS in LESCO.

The initiative of HRIS was started in 2007, and I joined LESCO in 2015. When I joined already two vendors were changed, and I was informed that the project of HRIS was complete and I just had to sign the GO Live. It was a real surprise for me to know that HRIS was not at all implemented. End-user was not competent to use the system and management expected that HRIS is present in a machine and MIS department will use it You see; this was the level of understanding about HRIS.

Table 4 presents the contrasting perspectives on benefits achieved in LESCO from HRIS.

Table 4

Contrasting perspectives on benefits of HRIS achieved in LESCO

	<i>Top management, HR department and MIS department</i>	<i>Heads of other departments and employees</i>
<i>Time-effectiveness</i>	<i>"This system saves most of the time for getting approval first and waiting for the decision about the leave or payroll."</i>	<i>" I need more time and resources to do both manual filing and also data update in the system"</i>
<i>Cost reduction</i>	<i>"Our operational cost is reduced because many transactions can take place on systems."</i>	<i>"Instead of decreasing resources, HRIS has resulted in increased resources. Now we also need persons or data entry in the system. There are focal persons from MIS department who enter data on behalf of the departments."</i>
<i>Less paperwork</i>	<i>"After the installation of HRIS system, paperwork is minimized, the only print is taken from the final report in which leave is accepted/rejected. During this process, concerned persons are sent copies of approved/disapproved leave including account office, Head of department and others."</i>	<i>"I think there is less change in paperwork. Our manual system is still in process. Copy of each document is printed and sent to concerned persons". "Our higher management opens automated system rarely. I am frequently asked to make manual notes and send a hard file containing the whole case to process."</i>
<i>Improved decision making</i>	<i>"HRIS provided real-time information that improves the decision". "Management can take the various types of outputs to have summary reports to take decisions."</i>	<i>"HRIS may improve decision making if higher management uses it... currently, it is being used for data entry updates by focal persons from IT department."</i>

The differences in perspectives indicate that rhetorically HR and MIS department has presented an ideal state, which is not achieved. Therefore, there is less agreement on benefits by other departments and employees. Moreover, contradictory statements were found even within the arguments from HR department such as in the following excerpt:

After the installation of HRIS system, paperwork minimized, the only print is taken of the final report in which leave is accepted/rejected. During this process, concerned persons sent copies of approved/disapproved leave to account office, Head of department and others. This saves most of the time for getting approval first and waiting for the decision about the leave or payroll.

In the above excerpt, the respondent has highlighted the achieved benefits from HRIS in the form of less paperwork involved. However, at the same time, the respondent also explains that printed copies of the document are sent to all the various stakeholders involved. Whereas, such information can be shared online through the system. The purpose of the automated system is to eliminate the process of such time-consuming and costly incurring hard copies to approve leave. Without the elimination of such processes, the benefits of HRIS are hard to achieve. The above excerpt also indicates that integration aspects of HRIS are not yet achieved or being utilized in LESCO. Furthermore, it is rarely being used by higher level management for decision-making. Top management still relies on and is more comfortable with hard files and typical bureaucratic file processing to take decisions as indicated in the following excerpt:

Whenever I have to make a case, I have to note down the points manually on the case before I send it upper in the hierarchy. We are in this practice for years ... ten twenty years... our seniors are not comfortable with computers. They demand manual work and hard copies.

This excerpt indicates that HRIS is not fully utilized in LESCO and its benefits are yet to achieve. It is implemented as another parallel system in the organization. For significant decision-making, still, the previous system is in use.

DISCUSSION

This study found that the HR and MIS departments of LESCO have put great efforts to adopt HRIS. However, even after a decade of efforts and involvement of multiple vendors, the system could not be adopted successfully. The initiative was taken in 2007, and even in 2017, LESCO had reached the operational stage only. The

relational stage was also achieved to some extent. However, the transformational stage was far to achieve. The findings, thus, supported the literature (Ruel, Bondarouk, & Looise, 2004) that most of the companies had failed to reach the transformational stage. Still, the literature has established such failure in the case of smaller companies, and larger companies are found to be successful in achieving the transformational stage. Whereas, in the case of this study, LESCO is a large public enterprise and has failed to fully achieve even the relational stage. Thus, the study has found that adoption of HRIS in the context of the public sector is far more difficult as compared to the private sector.

Literature has found several benefits of HRIS adoption, such as increased efficiency and effectiveness, reduced paperwork, cost and time saving, improved stakeholder's value and increased return on investment and productivity (Aggarwal & Kapoor, 2012; Parry and Olivas, 2011; Brown, 2002; Mayfield, Mayfield and Lunce, 2003). However, unlike the established literature, this study has found that adoption of HRIS has remained very slow and costly for the public organization. Instead of decreasing cost, it has created the need for extra resources for data maintenance. The operational cost is enhanced because the organization is running two parallel systems. After the adoption of HRIS, the efforts of employees doubled because they are expected to maintain both manual and online data updates. Therefore, contrary to the established literature, this study highlights that adoption of HRIS may not necessarily result in benefits rather may be costly for the organizations particularly when it is not implemented in true spirit.

This study has found various factors that are crucial for the adoption of HRIS in public sector organizations including top management vision and support, organizational culture, training and technical expertise of end users and employees' commitment. Lack of trained staff and technical expertise are found to be challenging in the adoption of HRIS in the organization. Literature confirms that the barriers in implementations of HRIS are time management, less trained staff to implement HRIS, the time taken and expertise required to implement changes required by each department and lack of IT support (Delorme & Arcand, 2010). The primary resistance is due to lack of awareness and limited knowledge that leads to natural resistance for acceptance of the change. The culture of the public sector is to work manually; this creates a problem. Due to the adoption of HRIS, the organization needs fewer staff. This reduction in staff creates a problem for the lower staff that is no longer needed. Also, lack of support from top management is found to be a significant challenge for the implementation of HRIS. The converging

views are found from the literature that confirms that high commitment from top management to adopt innovative technologies results in accelerated efforts towards HRIS while lack of commitment from top management hinders in the adoption of HRIS (Ferdous et al., 2015).

The study also finds that HRIS is a technical and complicated software and it requires competency to use and maintain. However, few people in the organization (LESCO) are competent to use this software, and those who use it efficiently demand high cost. Also, findings reveal that once the organization trains the existing staff, they leave the organization to avail themselves better opportunities. Findings also reveal that the adoption of both manual and automated systems is costly for the organizations. Public sector organizations in Pakistan prefer maintenance of manual records that underutilizes the benefits of HRIS. There is a natural resistance to change in Pakistani culture, where adoption of change creates a hindrance until top management provides incentives. Whereas, in the case of LESCO, top management wanted both systems move side by side. This creates a hindrance in the adoption of change and a lack of support from top management. These findings of the study are unique, and converging views are found in the literature (Williams, Onsmann, & Brown, 2010) that in any organization, values are the reflection of a company's culture as it is considered as the prominent feature in success or failure of adoption of HRIS.

Adjustment to the less paper is found to be an additional challenge in the adoption of HRIS, which is supported by the literature (Kananu & Nyakego, 2016). Even after achieving the operation stage, there is still much paperwork involved and data is recorded in hard files simultaneously. Hence, the organization is struggling with two systems (online and manual) at the same time. The arguments of the institutional logics perspective have important implications to explain this phenomenon. The prescription of HRIS is presented under NPM reforms that aim to modernize public organizations with business practices.

However, the successful adoption of HRIS is a great challenge for LESCO due to already prevailing practices and the unique characteristics of the public sector organization. Therefore, the new system has not replaced the existing system. Rather both systems are in practice at the same time, which has resulted in double efforts on the part of employees. Surviving with double systems is costly for the organization and creates conflicting situations for the employees. The employees have shared several experiences where they are confused about which system has to be practiced. Moreover, working with both (manual and automated) systems has



doubled their effort and created frustration in system users. The findings of this study, thus, strengthen the argument of institutional logics perspective that organizations are faced with multiple demands from varying logics at the same time which expose them to conflicting situations. Coping with such situations is very challenging for organizations. Either they have to replace the old logic with new logic or come up with some hybrid solution to cope with this challenge.

CONCLUSION & RECOMMENDATIONS

The study contributes to the body of knowledge by increasing the understanding of the adoption of HRIS in public sector organizations that is an under-researched area, especially in developing countries. The study concludes that top management commitment and support play a vital role in the adoption of HRIS. HRIS automates the tasks and saves time thus leading to efficient and better decision making. However, such benefits can only be achieved with the transformational stage of HRIS. So far, LESCO has achieved the only operational stage of HRIS, and both manual and online systems are working side by side in the organization which is quite costly for the organization and challenging for the employees. Several challenges are identified in adoption that include lack of technical knowledge and expertise, untrained staff, lack of commitment with the organization, work on both manual and automated systems simultaneously, top management reluctance to implement the automated system and resistance to change as a cultural factor. The findings also support the argument of institutional logics' perspective that organizations faced different institutional demands from a variety of institutional logic at the same time, which present conflicting situations for the organizations.

The study used the case study research design and data was collected from semi-structured interviews. One of the limitations of the study was that the study used a single source of data collection. Through triangulation of data from multiple sources (such as policy documents, company reports, observation) the validation of data could be enhanced. However, the interviews were conducted at different levels in the hierarchy and both inside and outside the HR department for triangulation of perspective and to enhance data validity. Despite this limitation, the research provides some critical insights into the implementation of HRIS in public sector in Pakistan that could be helpful for the HR practitioners to acquire a better understanding of the current scenario. The study also highlights the benefits and challenges in the process of adoption and implementation of HRIS in the public

sector and provides the following recommendation to overcome it. These recommendations can be used by policymakers and HR practitioners for the successful implementation of HRIS in their organizations.

- i. Firstly, there is a need for visionary leadership that supports the employees in the adoption and implementation of HRIS in the organization. Their role is predominantly the most important in successful and efficient implementation. It is important to educate, train and persuade them about the benefits of implementing HRIS in their organization.
- ii. Secondly, there is a need for an efficient performance management system that should make policies and plans to retain employees through incentivizing them both intrinsically and extrinsically. Similarly, frequent training along with some incentives must be provided to the employees to use the new system and reduce the old manual system. It is important to highlight the significance of using the HRIS tool to the employees, so they adopt it, and once employees become comfortable with the new system, the old system can gradually be completely replaced with the new system.
- iii. Thirdly, it is noted that HRIS is used at the administrative level; however, the purpose is to provide a strategic decision. Therefore HR strategy must be aligned with the strategic goals of the organization that allows HR practitioners and top management to use it at a strategic level to make better decisions for the organization.
- iv. Lastly, the data of HR must be well integrated across various departments to increase availability and readiness of information to support top, operational and administrative tasks.

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