

EXTENT OF HRIS ADOPTION AND ITS IMPACT ON ORGANIZATION'S PERFORMANCE:  
MODERATING ROLE OF HR STAFF EXPERTISE

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**Abstract**

*The Human Resource Information System (HRIS) is a specialized system that was designed to improve the management and alignment of organization's human resources with organization's performance. Organizations that are best placed to reap the benefits of HRIS are those that completely map their HR functions onto their HRIS. Absence or partial implementation of any function of HRIS may negatively impact the organization's performance, which does not yield the desired results. This research examined the relationship between the extent of HRIS adoption and its impact on organization's performance, in a sample (n = 63) of HR managers from various organizations that are using the computerized system in the human resource (HR) department. Additionally, the moderating role of HR staff expertise in this relationship was also tested. Findings supported that positive association exists between the extent of HRIS adoption, HR staff expertise, and organization's performance. However, HR staff expertise did not impact the relationship between the extent of HRIS adoption and organization's performance.*

*Keywords: Human Resource Information Systems (HRIS), Extent of HRIS, Organization's Performance, HRIS Pakistan*

Conventionally, computer technology was just used as information processing tool. Subsequently, its use was transformed into the information systems. In organizations, information and human are two important resources (Martinsons, 1994), which need to be managed in such a way as to get maximum benefits. But unfortunately, many of the organizations have not fully utilized the benefits of Information Technology (IT) in their HR departments (Mishra & Akman, 2010; Othman & Teh, 2003; Teo, Lim, & Fedric, 2007). Like other organization's financial and non-financial resources can be managed effectively by using information technology, Human Resource Management (HRM) departments have been utilizing this technology in form of HRIS (DeSanctis, 1986). HRIS is a combination of HRM functions and IT or it can be said that HRIS is an IT-backed HRM System (Alam, Masum, Beh, & Hong 2016; Kavanagh & Thite 2009). HRIS is designed to support the core human resource functions in human resource department (Dunivan, 1991), according to Buzkan (2016) these resources play an important role in organization's success.

HRIS was evolved by automating employees' record keeping in the personal department in early 1960s. In the beginning, HR department was not treated as a strategic player in achieving organization's success, as a result, initially the process of adoption of this technology in HR was slow. On the other hand, earlier, it was managed by a small group of Information Systems (IS) specialists who worked in personnel department in contrast to centralized Management Information Systems (MIS). The reason behind this arrangement was HR's lack of technological orientations and hesitation to give up control to others. Numerous evidences are available where the research has been conducted on the utilization of HRIS in different functions of HRM in isolation e.g. Payroll and Benefits, E-recruitment, E-training, E-learning, etc. (Tursunbayeva et al., 2016; Beulen, 2009) and organizations are required to manage HR resources in such a way as to achieve organization's strategic goals. HRIS plays a vital role in not only maintaining organization's human resource information but also focusing on achieving organization's goals and objectives. The use of HRIS and its reasons in all functions of HRM is lacking empirical evidence, (Parry, Selbie, & Leighton, 2007; Sadiq, Khan, Ikhlaq, & Mujtaba, 2013). One major reason behind lack of the optimum use of HRIS could be its adaptability among the users/employees. Adaptability could be explained in terms of lack of staff's professional skills who can understand the use and realize benefits by achieving superior performance. On the other hand, many organizations are using computerized systems in HR at a limited level because of lack of required skills and expertise of HR staff.

The strategic benefits of HRIS can only be achieved by the involvement of HR professionals, and their expertise plays an important role towards its full utilization (DeLone, 1988). Buzkan (2016) stated that it is the responsibility of human resource personnel to get full benefits of HRIS in achieving organization's optimum performance. Thus, it is necessary to examine the moderating role of HR staff expertise in the relationship of HRIS adoption and organization's performance. Lantara (2016) describes the organization's performance as a strategic outcome. Richard, Devinney, and Johnson (2009) argued that the most widely used outcome construct in management research is organization's performance.

Although HRIS as a concept has been adopted globally, however on implementation side its coverage remains partial in some functions of human resource and to a greater extent in large organizations. However, its applicability is witnessed as marginal in the case of Pakistan (Ahmer, 2013; Hanif, 2011; Kumar et al., 2013). The available literature is insufficient that describes the extent of HRIS adoption in the local context, necessitating Pakistani context being explored to contribute to the international body of knowledge. The local literature portrays scarcity in describing the extent of HRIS adoption and how actually HRIS affects the organization's performance. Chakraborty and Mansor (2013) suggested that research should be conducted on HRIS adoption in other parts of the world, as most of the literature on HRIS adoption is available in Europe and outside Asia. Tansley and Watson (2000) also indicated that HRIS research lacks in theoretical consideration. In order to provide strong guidance to practitioners by explaining the concept of the extent of HRIS adoption, the importance of HR staff expertise and how the extent of HRIS adoption affects the organization's performance are to be investigated (Marler & Fisher, 2013). Thus, it seems imperative to examine the relationship between the extent of HRIS adoption and its impact on organization's performance in the context of Pakistan.

### Literature Review

The main objective of reviewing the relevant literature is to establish theoretical foundations between key variables i.e. extent of HRIS adoption, HR staff expertise and organization's performance. The literature reviewed is presented in different sections; the first section covers the studies that introduced the basic concepts of HRIS, the extent of use of HRIS, the role of HR staff expertise, and the concept of organization's performance.

HRIS is a combination of technology and functions of HRM (Kavanagh & Thite, 2009). The literature expresses the concept with different nomenclatures like e-HR, e-HRM, HR intranet, Web-based HR, computer-based human resource management systems (CHRIS), and HR portals. These names describe the IT possibilities in HR functions (Findikli, Beyza & Bayarcelik, 2015; Marler & Fisher, 2013; Ruel, Bondarouk, & Looise, 2004; Ruel, Bondarouk, & Vander Velde, 2007). Kavanagh and Thite (2009) expressed that different nomenclatures used in the domain deals with delivering of the HR services to employees without the involvement of HR professionals through HR portals. Ruel et al., (2004) distinguish the HRIS from other systems as HRIS is limited those individuals who are working in or with the organization's HR functions or departments. Information technology has changed the processes and practices of HR. Human resource professionals who know the importance of technology and its role in organization's performance provide appropriate skills in the right place at the right time in organizations. In the changing trends, organization's success is to rely more on the insight of HRIS. The concept of HRIS is defined by different authors as:

*DeSanctis (1986) as "HRIS is designed to support the planning, administration, decision-making, and control activities of human resources management. HRIS is an independent system which is not treated as a part of centralized management information systems" (p. 15)*

Tannenbaum (1990) HRIS refers as "a system used to acquire, store, manipulate, analyze, retrieve and distribute pertinent information about an organizational human resource."

Kavanagh and Thite (2009) synthesized the definition of HIRS as "a system used to acquire, store, manipulate, analyze, retrieve, and distribute information regarding an organization's human resources to support HRM and managerial decisions" (p. 17).

What is common across all these definitions of HRIS, either implicitly or explicitly, is a system or computerized system, which uses the technology to support HRM functions in HR department. According to Parry (2009) it can be as simple as a spread-sheet to a comprehensive HRIS. In order to support the HRM, the technology is required to its full extent. Marakas and O'Brien (2011) identified

four basic technology areas of information systems; (1) computer hardware, (2) computer software, (3) data resource management, and (4) telecommunication and networks. Teo et al., (2007) described that the extent of HRIS in terms of “hard” physical resources and in terms of “soft” application resources as the provisioning of more workstations in human resource department and adoption of more HRIS applications by HR department respectively. The following section explores the literature relevant to the extent of HRIS adoption and organization’s performance. **Extent of HRIS Adoption and Organization’s Performance**

Previous literature argued that the extent of HRIS adoption requires the availability of resources by alignment between HR professionals and top management which would overcome the shortage of resources that ultimately helps to adopt more HRIS applications (DeSanctis, 1986; Teo, Soon, & Fedric 2001; and Teo et al., 2007). Similarly, Ruel et al., (2007) mentioned that HRIS plays a strategic role and resultantly the processes of services have increased. Karim, Somers, and Bhattacharjee (2007) describe the extent of implementation of IT systems in terms of quantity of implementation of IT systems into three areas like the extent of system implementation in functions areas, in the department and in the entire organization.

Teo, et al., (2001) discussed the extent in two different ways: firstly, the computer resources dedicated for the use of human resource department; secondly, the application level utilization of HRIS across the organization. The extent of HRIS is actually measured by the application level of HRIS functions. The HRIS function is described as: strategic integration, personal development, communication and integration, records and compliance, human resource analysis, knowledge management, and forecasting and planning (Mayfield, Mayfield, & Lunce, 2003; Obeidat, 2012). Scholars like Beadles, Lowery, and Johns (2005) discussed the HRIS in comparison of public and private sector organizations that the impact of HRIS adoption is satisfactory but Parry et al., (2007) found this variation is because of the nature of environment prevail in public and private sector organizations. They also concluded that HR staff believed that the limited use of HRIS functions may not provide full benefits until the full extent of HRIS is used. Parry’s further research in 2009 found that this variation towards the extent of HRIS across organizations is due to organizations lacking HRIS knowledge and expertise. The HRIS expertise of the staff enables them to demand more and more applications. In order to explain HRIS functions in details, the detailed description of each factor is given below:

The strategic integration is taken as a liaison of HR department with the top management in terms of making long-term strategic needs as HRIS is treated as a strategic partner. Mayfield et al., (2003) described the strategic integration as to aid top management in making long-term HR planning (Obeidat, 2013). The personnel development is one of the responsibility of HR department to develop the skills and abilities of the current staff to meet the current needs and future needs by enhancing staff’s knowledge, skill and ability. Mayfield et al., (2003); Obeidat ( 2013) described the personnel development as a means to enhance worker’s skills and ability. Communication and integration means flow of information within the organizations. This flow of information plays a vital role in implementing the organization’s rules. Connecting one entity with the other, to get the optimal mix, is only possible with the help of communication within the organization (Mayfield et al., 2003; Obeidat 2013).

Records and compliance is expressed as one of the basic functions of HRIS to store the records of employees. The record helps the organization to perform internal activities and also helps outside organization for different compliance. The record management of employees may help in meeting legal obligations (Mayfield et al., 2003; Obeidat 2013). Human Resource Analysis deals with soft resources of an organization that play important role in competing in the market. Human resource analysis provides help in exploiting the opportunities by analyzing the availability of staff and positions, and how available expertise meet the needs of these positions Mayfield et al., (2003). Kazmi and Naaranoja (2014) highlighted HRIS as a tool used for knowledge management of human resource knowledge base; it is used to accumulate the scattered organizational knowledge for providing organizational support. Mayfield et al., (2003) describe the knowledge management as to facilitate, develop, and retain information of beneficial human resource practices.. Preserving the organizational memory is beneficial for high-level organization’s performance. Obeidat ( 2013) explained it further as it is important for the organizations and it is the source of important organizational knowledge which is not documented.

Forecasting and planning help to store HR skills and abilities in a way that helps the organization to predict the future trends in human resource requirements. The availability of skills and predictive growth in skills help to determine the organization’s future needs. Planning means collecting

information from all sources, which includes internal sources and external sources. Forecasting means the estimation of future demand of human resources with respective skills and abilities. Mayfield et al., (2003).

After exploring all the contributing factors of HRIS it is proposed to move toward its utilization and its impact on organization's strategic outcomes like organization's performance. Singh, Darwish, and Potocnik (2016); Richard et al., (2009) argued that organization's performance can be measured subjectively and objectively and these both measures are consistent and reliable. In accessing the firm's subjective performance, the performance is measured by comparison with the rivals. Subjective organization's performance is made on the parameters like (1) market share, (2) sales revenue, (3) innovation and (4) profitability. Lee and Choi (2003); Venaik, Midgley, and Devinney (2005) also measured the organization's performance in terms of subjective measure that includes the overall success of the organization in terms of market share, profitability, and innovation. The current study also deals with organization's performance which would be measured in its subjective terms.

Hussain, Wallace and Cornelius (2007) claim that HRIS allows the HR staff to become strategic players in the organization. Chand and Katou (2007); Khalil Darwish and Singh (2013); Rodriguez and Ventura (2003); Schuler and Jackson (1999), also indicated that the strategic orientations of HRIS have a positive impact on organization's strategic outcomes like its performance. Similarly, Rodriguez and Ventura (2003) extended their research and collected data measuring key performance indicators of organization's performance i.e. return on assets, firm total sales growth and overall firm performance as well and found a positive impact of HRIS on these indicators. The extent of HRIS predicts organization's performance. Thus, the following hypothesis is formulated:

*H1: The extent of HRIS adoption has a positive impact on organization's performance.*

#### **Moderating Role of HR Staff expertise**

HR staff expertise means that staff should have the working knowledge of HRIS (Nguyen & Nguyen, 2016; Thong, 1999; Troshani, Jerram, & Rao Hill, 2011). In literature, it has been found that that the extent of HRIS varies across organizations because of organizations lacking HR staff knowledge and expertise in using HRIS. Panayotopoulou, Vakola, and Galanaki (2007) argued that HR professional needs training of using HRIS. The expertise of HRIS is essential for adoption of human resource systems in the organization. Teo et al., (2001) discussed that the HRIS knowledge and expertise are seemed impediments for not adopting the HRIS.

Al-Mobaideen, Allahawiah and Basoni (2013) express that the HR staff competency plays important role in working of HRIS; if the HR manager is competent, then HRIS works well. Beadles et al., (2005) argued that without proper training of Human resource staff, the staff is unable to take full advantage of HRIS capabilities. In some of the cases due to lack of competency of the staff, HRIS is underutilized. Haines and Petit (1997) expressed that computer skills are a predictor of high usage level of HRIS applications.

The use of HRIS allows the HR staff to become the strategic player in the organization, and the HR professional to become a strategic partner in terms of providing support in strategic decision-making. HRIS is an enabler to enhance the professional standing of HR professionals by using HRIS (Hussain et al., 2007). Igbaria and Nachman (1990) expressed that employees having computer skills are more satisfied with using the system, and the user satisfaction is significant with system utilization. Thus, more computer skills lead to more system utilization and these skills are the core determinants of application use (Kasper & Cervený, 1985; Palvia, Means, & Jackson, 1994). The author expressed that the relationship between the extent of software use and organization's profitability is significant; moreover employees skills lead to more utilization of software application, resultantly it have impact on organization's profitability (Palvia et al., 1994 ; DeLone, 1988). Thus, on the basis of the discussion it is hypothesized that:

*H2. HR staff expertise has a positive impact on organization's performance.*

*H3. HR staff expertise moderates the relationship between the extent of HRIS adoption and organization's performance.*

#### **Theoretical framework**

On the basis of the above literature review, the research model in Figure1 has been proposed to identify the relationship between the extent of HRIS adoption and its impact on organization's performance. Furthermore, it shows the moderating role of HR staff expertise in this relation.

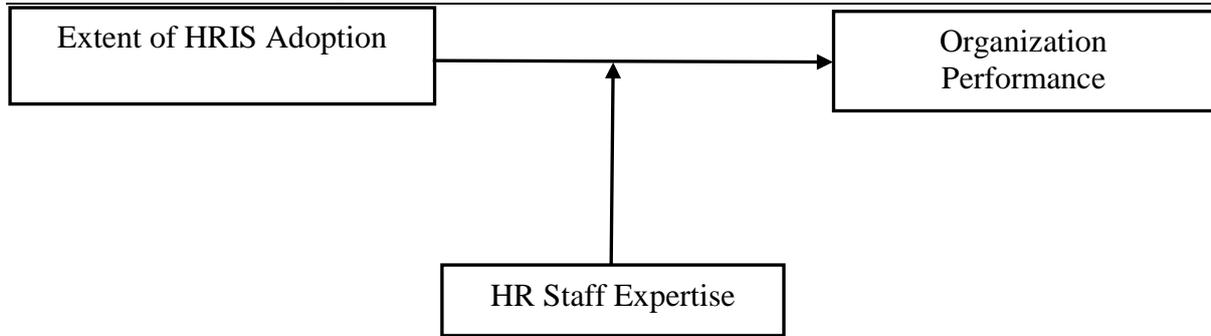


Figure 1. Research Framework

### Research Methodology

The aim of this study was to investigate the extent of HRIS adoption, and its impact on organization performance. Further, the study also observed the moderating effect of HR staff expertise. The research philosophy of this study fall under the positivist paradigm. Saunders, Lewis, & Thornhill (2016), discussed that philosophical assumptions related to the creation of knowledge in three sets, e.g. (i) ontology, (ii) epistemology, and (iii) axiology. Based upon the ontologically assumption, the current study follows in objectivism in which the constructs of the study are independent to human intervention. In the context of organization and technology adoption, the philosophy of current study promulgates positivistic viewpoint. Axiology deals with the research's value judgement. It add the cultural context, as the current study deals with local context.

The study current study used mono method approach with survey technique. Survey design allows researchers to gather data from a large population. According to Orlikowski & Baroudi (1991), 49% of the research conducted in the field of IT adoption in organizations is based on survey design. The study was conducted in natural environment, managers of sampled organizations were contacted during their working hours. The unit of analysis were organizations using any sort of computerization in their HR department.

The population of the study was private sector organization in the capital city of Pakistan. According to (Ahmer, 2013) only 60 companies were using HRIS applications in Pakistan of different vendors. Owing to the fact that many organizations use manual or makeshift arrangements for managing the record of their employees (Malik & Rehman, 2002) . Non probability sampling was employed. The reason for choosing non probability sampling was because the population was unknown. Managers working in HR department of the different organizations were approached through professional acquaintances.

Data was collected through self-reported questionnaire. The questionnaire was distributed to HR departments of organizations. According to Mishra and Akman (2010) judgmental sampling is appropriate for organizational level studies relating to adoption of ICT whereas (Ahmer, 2013) also supported the arguments in Pakistani context.

A covering letter was attached to explain the purpose and scope of the study. It was also ensured that the data collected would be used for research purpose. A total of 140 questionnaires were distributed to organizations having any sort of computerization in their HR department. In response, 63 usable surveys were received. The response rate was 45%.

### Measures

The extent of HRIS was measured in terms of utilization level of HRIS functions. The scale is based on the functions proposed by (Mayfield et al., 2003). Thirteen questions were asked to measure the extent of HRIS adoption. The extent of HRIS adoption measured by using five Likert point where 1 is "Not at all" and 5 is "To a great extent". The coefficient of alpha of extent of HRIS is 0.952. The scale of HR staff expertise was adopted from (Thong, 1999). The scale has three items. The data is measured in five Likert points where 1 is "Strongly disagree" and 5 is "Strongly agree". The alpha reliability of this scale was 0.814. Organization's performance is referred as perceptual measures of organization's financial performance with respect to the rival in the industry. This perceptual measure includes market share, sales revenue, innovation and profitability of an organization with respect to the rival in the industry (Lee & Choi, 2003; Singh et al., 2016). Five points Likert scale containing 5 items of organization's performance was adapted from (Lee & Choi, 2003). Where "1" is "Strongly disagreed" and "5" is "Strongly agreed". The manager / senior manager of HR department is asked to

respond with respect to competitors in the industry. The alpha reliability of this scale was 0.889. The reason for opting perceptual measures is non-availability of financial figures. Dess and Robinson (1984) equating the perceived organization's performance with objective organization's performance with high correlations, suggest that in the absence of objective measures, subjective measures would be appropriate to measure organization's performance.

**Demographic profile of the respondents**

Table1: *Personal Demographics*

Demographic Variable	Category	Frequency	Percentage
Gender of the respondents	Male	45	71.4
	Female	18	28.6
	Bachelor	6	9.5
Education of the respondents	Master	36	57.1
	MS/ M.Phil.	20	31.7
	Ph.D.	1	1.6
	Less than 25	7	11.1
Age group of the respondents	25-34	41	65.1
	35-44	11	17.5
	45-54	2	3.2
	55-64	1	1.6
	65 +	1	1.6
Current designation	Deputy Manager / Director	29	46.0
	Manager / Director	19	30.2
	Senior Manager / Director	4	6.3
	Others	11	17.5
	Less than 1 year	6	11.1
Experience (Current Designation)	1 to 3 years	27	42.9
	4 to 7 years	19	30.2
	8 years or more	10	15.9
	Less than 3 years	17	27.0
Experience (Current Organization)	3 to 6 years	23	36.5
	7 to 10 years	16	25.4
	11 to 14 years	3	4.8
	14 years or more	4	6.3
	Less than 5 years	13	20.6
Total professional experience	5 to 9 years	20	31.7
	10 to 14 years	18	28.6
	15 to 20 years	17	11.1
	21 years or more	5	7.9

Table 1 presents demographic of respondents. Among the sample, 71% respondents were male and 28% were female. The age of the respondents, the HR managers, ranged between 25 and 44 years: 65 % were between 25-34 years, 17% between 35-44 years. Majority of the respondents were young and belonged to 25-34 years' age bracket. As regards the experience of respondents in the current designation, 11% had less than one year, 42% between 1 to 3 years, 30% had between 4 to 7 years and 16% 8 years or more. In term of experience of employees in the current organization, 88% fall under 10 years. As far as the total professional experience of the managers are concerned, 81% fall under 15 years. It shows that majority of the managers are experienced, and have rich experience in their current designations.

**Reliability and Validity Analysis**

In order to establish the internal consistency of the instrument Cronbach alpha coefficient test was performed. Cronbach alpha coefficients for organization's performance was .88 with 5 items, extent of HRIS was .95 with 13 items and HR staff expertise was .81 with 3 items. Alpha reliabilities were adequate for all measures and need not to delete any item. The previous studies conducted in the same field indicated that minimum reliability score ( $\alpha=0.70$ ) adequate for determining the strong connections between items on a scale.

Table 2: Reliability of Measurement

Variable	Number of Items	Cronbach's Alpha
1. Organization's performance	5	0.88
2. Extent of HRIS	13	0.95
3. HR staff expertise	3	0.81

The validity would be used to evaluate the instrument to establish that the instrument used to measure the concept is correct for a measuring scale. The scale used for this survey was adopted and it was a well-established scale. Minor changes in wording were made to make it cleared for respondents in the context of HRIS. The scale of one variable is measured utilization level of HRIS functions. The scale is based on the functions proposed by (Mayfield et al., 2003).. The content validity of the instrument was validated by experts' judgment. Generally speaking, experts form academic and industry have the consciences that scale is valid.

### Data Analysis

#### Descriptive Statistics and Correlations

This study was conducted to investigate the extent of HRIS adoption and its impact on organization's performance and, further, how HR staff expertise moderates the relationship between the extent of HRIS adoption and organization's performance. In this section, data analysis and interpretation is presented.

Table 3 presents descriptive statistics and correlations of extent of HRIS adoption, HR staff expertise and organization's performance. Pearson's correlation was used to explain how these variables related to each other. Alpha reliabilities for all measures were above .70 level. All correlations above .69 in magnitude are significant at  $p < 0.01$ . The result of Pearson's correlation between Extent of HRIS and Organization's performance is .698\*\*,  $p < .01$ , and HR staff expertise and Organization's performance was .753,  $p < .01$ . All results were statistically significant and positive in relations. The mean value of organization's performance was 3.67 (SD 0.87) and extent of HRIS adoption was 3.84(SD 0.87).

Table 3: Means, Standard Deviations, and Correlations

Variable	Means	SD.	1	2	3
1. Organization's performance	3.67	0.87	1		
2. Extent of HRIS	3.84	0.87	.698**	1	
3. HR staff expertise	3.82	0.95	.753**	.792**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed), n= 63

#### Regression Analysis

Multiple linear regression was performed to test all the hypotheses. In the first step, predictor variables, the extent of HRIS adoption and HR staff expertise were entered. In the second step, moderator was entered as shown in table 4 between the extent of HRIS adoption as the independent variable and organization's performance as the dependent variable.

Table 4: Multiple Regression

Predictors	Organization's Performance		
	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1</b>			
Extent of HRIS adoption	0.272*	0.594**	
HR staff expertise	0.490**		

**Step 2**

Extent of HRIS adoption x HR staff expertise	-0.041 (ns)	0.597	.003
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\**p* < .05, \*\**p* < .01

Extent of HRIS adoption showed a positive relationship with organization’s performance ( $\beta=0.272^*$ ,  $p<.05$ ). The result confirmed hypothesis 1. Similarly, HR staff expertise depicted positive relationship with organization’s performance ( $\beta= 0.490^{**}$ ,  $p<.01$ ). The result supported hypothesis 2. The result of moderation analysis explained that extent of HRIS and HR staff expertise interaction was not significant, thus hypothesis 3 was not supported.

**Discussion**

This section of the study presents discussion on research findings. The discussion on research findings followed by the research hypotheses of the study. The first hypothesis was the extent of HRIS adoption has positive impact on organization performance. Use of information technology in organization’s business process remained significant in the field of the information system. The study has shown HRIS utilization in terms of adoption of HRIS in the organization; in addition to that, the greater the extent, the greater the benefits organization derives. The study found significant support for the positive relationship between the extent of HRIS adoption and organization’s performance. The findings suggest that greater level of utilization of HRIS functions increases the organization’s performance, which is in accordance with the findings of (Teo et al., 2007).

The second hypothesis was HR staff expertise has a positive impact on organization’s performance. The study also found direct support in the relationship of HR staff expertise and organization’s performance. The findings suggest that higher HR staff expertise in HRIS increase the organization’s performance, which is in accordance with the findings of (DeLone, 1988 ; Palvia et al., 1994).

The third hypothesis was HR staff expertise moderates the relationship between the extent of HRIS adoption and organization’s performance. The moderating role of HR staff expertise on the extent of HRIS adoption and organization’s performance was not supported. The findings of the third hypothesis contradictory with the findings of (Bamel et al., 2014; Nguyen & Nguyen, 2016). One major reason may be that respondents of the study possibly perceive their expertise as an outcome of HRIS utilization while serving in HRIS department instead of extent of HRIS adoption. In Pakistan, HRIS predominantly managed by IS department of the organizations instead of HR department.

**Conclusion**

The focus of current study was to investigate the relationship between extent of HRIS adoption and organization’s performance. The study contributes to the body on knowledge on the extent of HRIS adoption and organization’s performance in the context of an emerging/developing country’s (Pakistan) context. The level of analysis of the study is organization. The sample of this study was drawn from organizations using any sort of computerization to their HR department. The result revealed that the extent of HRIS adoption have influence on organization’s performance, the study confirms that there is a positive relationship between these two factors, when considering subjective measures of organization’s performance. This study also investigated the role of the HR staff expertise in relation to the extent of HRIS adoption and organization’s performance. All hypothesized effects were proved, whereas the effect of HR staff expertise was only proved in direct relation with organization’s performance, no significant moderating effect were discovered. The findings of this study also reiterated the valuable contribution in the literature of information systems implementation. Specifically, with reference to concept of extent; the results from the current study indicates that organizations that adopt a holistic system of HRIS will reap its benefits.

**Managerial Implications**

In today's competitive business work environment, human resources and its management play a very crucial role in a business success. However, its management is concerned, traditional paper work is not so effective anymore, so the use of technology (IT) in human resource management functions has been studied and found effective by different researchers. Roehling et al., (2005) claims that in adoption of the system the role of HR staff found positive impact. This study is also an attempt to explain the concept of the extent of HRIS adoption in the organization with reference to organization’s performance and how HR staff expertise could have moderating impact on this relationship. As far as its implications

is concerned, the extent of HRIS adoption helps the practitioners in how they can achieve superior performance by implementing HRIS to its greater extent. The manager should adopt of HRIS in HR functions, the HRIS may save time and efforts, which may be diverted onto other important strategic activities as traditionally HR employees exerts the most time and efforts on administrating and managing HR operational level issues. This study also suggests the importance of HR staff expertise in superior organization's performance. Moreover, HRIS not only provides information but also helps in decision making regarding other organizational functions such as knowledge management recruitment and selection, time, labour & labour relations, personnel administration, training and development, payroll, benefit and compensation administration, pension administration, performance appraisal and management, expense and travel administration, organizational management and health and safety. Furthermore, cognizance, training and development of the employees to get expert in HRIS could predict more positive results in the form of organizational effectiveness and efficiency. Thus, the findings have significant contribution to the body of knowledge in Pakistani (Asian) context as Chakraborty and Mansor (2013) expressed that most of the literature on HRIS adoption is available in Europe and outside Asia. So, this research also contributes as empirical evidence with reference to contextual aspect.

### Study Limitations and Directions for Future

The limitation of this research is that the findings of this research cannot be generalized to other information systems in organizations. Another apparent limitation with reference to research on HRIS in Pakistan, it is still at early stage and lacking strategic outcomes; there is still room for conducting research with more general populations. Future research may be conducted at individual level, to explore the role of HR staff expertise in the extent of HRIS adoption. The extent of HRIS adoption served as the basis for HRIS implementation in organizations to achieving strategic outcomes. More quantitative and qualitative studies should be conducted with more general populations at the organization level and at the individual level to overcome empirical foundations and theoretical frameworks in the field of HRIS. Furthermore, mediating role like creativity and innovativeness may be checked. Moreover, leaders' or upper echelons' intentions, attitude and behaviour play an important role in new adoptions and organizational success or failure. So, moderating role of top management may be checked in further studies.

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