



## Factors Motivating Organisations to Adopt HRIS in the State of Tamil Nadu

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### Abstract

*This paper emphasizes the importance of adoption of the Human Resources Information Systems (HRIS) to help the organisations manage human resources effectively. However, organisations in Tamil Nadu have a lack of research on adoption of HRIS. The purpose of this study is to identify the factors contributing to organizational decision-making for the adoption of innovation of HRIS. This study examines relationship of six factors, namely; Relative Advantage, Compatibility, Complexity, Top Management, HRIS expertise and Competition responsible for the adoption of innovation of HRIS in organizations of Tamil Nadu. To collect the data from respondents of this study, structured questionnaires are distributed. From the results of this study, it is found that Relative Advantage and Compatibility have positive relationship for HRIS adoption and Top Management Support and HRIS Expertise are also the top contributors to the decision of HRIS adoption. Further, it is said that introduction of new innovations in information systems can meet with organizational reluctance. The main problem for the adoption of HRIS is the complexity of new technology.*

**Keywords:** Human Resources Information Systems, Relative Advantage, Compatibility, Complexity, Top Management, HRIS expertise and Competition.

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### Introduction

In the changing global environment, organizations have to incorporate innovations to get competitive advantage. Of late, many organisations have been successful owing to induction of new changes in all departments. Before introduction of new technology, managers were unable to control over workforce. Hence, the new information technology (IT) was introduced at a rapid pace. Now, IT has started playing a major role in managing the various functions of organization, particularly human resource (HR) and also essentially being used to convert manual human resource operations to computerized Human Resource Information Systems (HRIS). The major function of HRIS is to retrieve and disseminate appropriate information on human resources. To enhance effectiveness of human resource department, the human resource managers should adopt HRIS. However, the adoption of any new technology will definitely face resistance from the workforce of the organisation. Hence, the top management should hold a discussion with workforce at length concerning potential advantage along with barriers of HRIS before being implemented.

### Literature Review

Culnan & Markus, 1987; Huber, 1990 highlighted the fact that Information technology had provided opportunities to transform organizations and help them achieve competitive advantages. Powell & Dent-Micallef, 1997 said that businesses had gained not only with competitive advantages of Information Technology (IT) but also with usage of IT to complement resources. Straus, S.G., Weisb and, S.P. & Wilson, J.M, 1998 gave their opinion that IT should play an important role in Human Resource Management (HRM) domain. Lippert & Swiercz, 2005 analysed that in current knowledge of economy, organizational success was dependent upon the efficiency of human resources (HR). Zhang & Wang, 2006 said that a successful way to run business in today's world is using appropriate application of Information Technology (IT) in HRM. Xu, Wang, Luo, & Shi, 2006 informed that with advent of information technology, information systems and internet technology, the business had expanded across the world.

### Definition of HRIS

HRM is an organizational function focusing on planning, selection, orientation, training, development, retention, appraisal, remuneration, and utilization of labour resource for achieving both individual and organizational objectives. HRIS is the backbone of HRM and also the blend of human resource management and information technology. It is combination of database, hardware and software that are used to store data in the

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database from all departments of the organization and produce the required information on demand to human resource personnel. Information Technology cannot work alone without the support of workforce and policies. Hence, due importance must be given to them to get the desired results through adoption and implementation of HRIS. Efficient utilization of technology in combination with policies and support of workforce should give competitive edge, that contributes to the organizational success or cause failure to the organization.

### Components of HRIS

The major functional components of HRIS are input, data maintenance and output (Kovach, Hughes, Fagan, &Maggitti, 2002). Input function enters personnel information into HRIS. The data maintenance function updates the database. Output function helps HRIS process make calculations, and then presents output comprehensibly.

### Uses of HRIS

HRIS can meet the needs of stakeholders of the organization. There are three groups of people, who interact with HRIS in an organization, are human resource professionals, functional managers and employees (Anderson, 1997). The HR professionals rely on HRIS to do even elementary tasks. The functional managers depend up on HRIS for superior data collection and analysis. Individual employees acquire more awareness of HRIS applications because of their need to control category selections as employee benefit options become complex. HRIS uses IT developments and features for efficient functioning of the HR processes. It requires huge investment decisions and independent of organizational size. Therefore, it is essential to convince the decision makers of benefits of adoption of HRIS.

In the competitive business world, internet has brought drastic changes in the business. Now, the world believes to be a global village and this new concept of doing business without having geographical boundaries has increased the importance of information systems. The major objectives of HRIS are giving better service, information access, cost saving or efficiency. Some of the said advantages of automating human resource functions are improved data accuracy, higher processing speed, and creation of more useful and sophisticated results and enhanced productivity (Ceriello& Freeman, 1991). Further, advantages are precision of information generated, availability of required information on time and ultimately saving the costs of the organizations (Tetz, 1973; Lederer, 1984; Wille& Hammond, 1981).

HRIS supports long term plans including the planning for work force, future demands to meet the upcoming challenges of human resource capital and for equilibrium in demand and supply of human resources of the organization. Information provided by HRIS also includes the compensation programs having information on salary forecasting, budgeting and negotiations as per

requirements of the organizations. The accuracy and timeliness of HRIS regarding the operations control and planning of HR activities is found important (Lederer, 1984).

Moreover, Contribution of HRIS is cost efficiencies, customer satisfaction and innovation (Broderick & Boudreau, 1992). Computerized HRIS function supports easier storage, updating, classification and analysis of data. Therefore, it enables better decision making on the management of human resource. Moreover, multi-fold advantages of HRIS are strategic and administrative (Kovach, Hughes, Fagan, &Maggitti, 2002). At the strategic level, HRIS tools are used to help in making a decision in HR functions (Farndale, Scullion, & Sparrow, 2010) but at the administrative level, HRIS is able to record complete information of potential or current employees (Harris &Desimone, 1995). It enhances the efficiency of employees and reduces the operational costs (Beadles, Lowery, & Johns, 2005; Dery, Grant, &Wiblen, 2009; Wiblen, Dery, & Grant, 2010). It is identified that enhanced productivity, lower costs, return on investment, and efficient employee communications are the top four benefits of automated HRIS (Wyatt, 2009). Finally, HRIS is used for administrative, strategic and decision-making purposes (Kovach, Hughes, Fagan, &Maggitti, 2002).

### Obstacles to HRIS

Many organizations resist new technology implementation, including HRIS, unless benefits are professed. The reason for reluctance in adoption and implementation of HRIS is the heavy funds required for HRIS adoption and implementation. Huge cost of instituting and maintenance of a HRIS, expensive software packages, costs of hardware and software for application programs along with cost of maintenance and updating are the major barriers in HRIS implementation. Additionally, to capitalize on all HR possibilities, provision of personal computers to workers and Internet connection are required. It is identified that the transitional costs from traditional HR to an HRIS is high (Brown, 2002). Major obstacles in acquiring maximum potential are insufficient finances and lack of support from the top management (Kovach & Cathcart, 1999). Further, major barrier is HRIS designers having insufficient knowledge of HR processes that finds it difficult to provide proper solutions of the problems. A survey conducted by the Institute of Management and Administration in 2002, the major obstacles in management of HRIS included deficient staff, insufficient budget, shortage of IT support, poor time management, and need for collaborating with other departments (E.W.T. Ngai & F.K.T. Wat, 2006).

### Factors influencing adoption of HRIS

This study has identified the six factors, namely; relative advantage, compatibility, complexity, support of top management, HRIS expertise, and competition, being responsible for the decision of

adoption of HRIS in Indian organizations that are discussed below

### **1. Relative Advantage**

Relative Advantage refers to the expected benefits and usefulness arising from HRIS applications in comparison to other applications (Rogers, 1995). It is one of the best predictors. Also it is positively related to an innovation's rate of adoption. The degree of relative advantage is economic profitability, social prestige and other benefits such as savings in time, effort, and cost. The most common benefits of HRIS includes efficiency of an HR department by automating and digitizing administrative tasks, simplifying work flow, the provision of timely and quick access to information, the saving of costs and quicker and less expensive recruitment, which are all very important factors in terms of operating, controlling, and planning activities in HR.

### **Compatibility**

Compatibility is defined as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 2003, p.250). Compatibility of innovation with cultural & social beliefs, existing ideas, and client requirements or vice versa could be measured. An innovation's incompatibility with cultural values could block its adoption and also with a preceding idea, affect its rate of adoption. If innovative product meets the needs of required system, it is a sign of compatibility. It is suggested by many researchers that compatibility might be somewhat less important in predicting the date of adoption than its relative advantage. A HRIS could perform day-to-day managerial tasks automatically. If users resist the changes in day-to-day practices and procedures, then HRIS adoption would face impediments. If the organization's culture readily accepts change and promotes learning to employees, it is more probable to adopt HRIS. Consistency in HR applications, user-friendly interface, compliance with existing IS architecture, integration of HR activities with other business functions, and fit of HRIS with other corporate systems are necessary to ensure compatibility.

### **Complexity**

Complexity is stated as the degree to which an innovation is perceived as relatively difficult to understand and use. High complexity of innovation restricted the organization from integration of innovation with organizational activities, increased uncertainty upon its implementation, and heightened the risk of adoption process. It is suggested that potential users are willing to accept and use the systems that are less complex. Major hurdle to adoption is complexity. However, for many innovations, importance of complexity is less than that of relative advantage. A HRIS requires computer expertise to modify, and is generally maintained by IS department. Generally, non-technical professionals face difficulty in understanding and using HRIS.

### **Top Management Support**

Top management support is recognized as an important element in adopting and implementing information technology. The understanding of innovation, attitudes toward innovation, extent of involvement in adoption process could influence top management support. It plays a critical role in creation of a supportive climate and provision of adequate resource to adopt and implement new technology. Top management could identify future business opportunities by exploiting information technology. Moreover, with active involvement and support, the top management could foster right direction for adoption of innovation. Additionally, visible top management support could signal the importance of innovation, lead to positive attitudes from users towards the innovation, and smoothen the conversion from existing work procedures to the Information System. With their leadership role, top management could ensure allocation of required capital and human resource for adoption of innovation. Top management support is crucial in overcoming user resistance and resolving probable conflicts and is also required for continued success of HRIS.

### **HRIS Expertise**

Expertise is a crucial factor in innovation adoption. HR expertise could be explained as knowledge of employees in HRIS. HRIS staff should be knowledge of more than one functional area; at least IS and HR functions. Availability of skilled HRIS professionals is essential in ensuring success. HR expertise could be achieved through user training (Chau & Hui, 2001). Training enhances technology competency, which could affect the speed and coverage of adoption of innovation (Warren, 2004). Organizations could delay adoption of innovation until the staffs acquire sufficient technical skills and knowledge of operating HRIS. Research suggests that organizations with technology competency are more likely to adopt innovations. If the staffs lack HRIS knowledge and skills, the rate of application of IT to HR departments could be slow.

### **Competition**

Competition has forced organizations to realize the importance of effective management of human resource. As organizations move towards knowledge-based economy, organizations are under pressure to better manage their human resource in order to be competitive. Therefore, organizations rely on HRIS for better decision making, better management of human resource and better allocation of HR resources.

### **Scope of the study**

This study would help HR managers in comprehending the factors affecting adoption of HRIS. This study has made a contribution to existing knowledge in innovation literature by studying adoption of HRIS in India. This study has also aimed at providing explanations as to why introduction of new innovations

could be a problem area.

**Objectives**

The primary objective of this study is to identify various factors and examine their contribution to the decision of HRIS adoption necessary for market competitiveness.

**Hypothesis**

Hypothesis is made on the basis of factors responsible for adoption of HRIS in the organisations irrespective of size and investment as follows;

1. Perceived relative advantage is positively related to HRIS adoption
2. Perceived compatibility is positively related to HRIS adoption
3. Perceived complexity is negatively related to HRIS adoption.
4. Top management support is positively related to HRIS adoption

**Data Analysis**

**Table I.** Response Rate

Total Population	Sample	Response received	Response Rate%
66	66	38	57.58

Total population of the study was 66 organizations. Questionnaires were sent to all 66

5. HRIS expertise is positively related to HRIS adoption.
6. Competition is positively related to HRIS adoption

**Research Methodology**

The researcher has used multiple sampling techniques to select the participants as samples, who are working the organisations adopting HRIS in the state of Tamil Nadu. The questionnaires were sent to respondents by post to collect data. Respondents were allowed to hide their organization names to get the fair response. Responses were received only from manager of human resource departments of 38 organizations. Variables were measured using a five point Likert Scale ranging from 1 to 5, namely; strongly agree, agree, neutral, disagree and strongly disagree. And also, in this study, multi methods of data analysis were employed and all hypotheses analysed by making use of descriptive statistics including means, standard deviations and correlations.

organizations and responses from 38 organizations were received.

Reliability statistics concept was used to check the reliability of data.

**Table II.** Cronbach's Alpha

Number items	Cronbach's Alpha
25	.850

Cronbach’s Alpha was 0.850 that was significant and it showed that data was reliable

**Table III.** Categories Descriptive Statistics

Factors	N	Mean	Standard deviation
Relative advantage	38	4.77	.57
Complexity	38	3.19	.90
Compatibility	38	4.61	.40
Top management support	38	4.98	.36
HRIS expertise	38	4.89	.32
Competition	38	4.17	.55
Valid N	38		

Top Management Support and HRIS Expertise are high mean values, which show the strong response of majority respondents. Other three categories have mean value above 3.00. Minimum mean value for Complexity

is 3.19. Standard deviation is not very high in all the cases. Maximum Standard deviation found in Complexity is 0.90 and lowest is 0.32 in HRIS Expertise.

**Table IV.** Correlation analysis

Variable	N	Mean	SD	RA	Compl	Compat	TMS	Hr Ex	Compet	Dta HRIS
Relative advantage(RA)	38	4.77	.57	1.000						
Complexity(Compi	38	3.19	.90	.532*	1.000					
Compatibility(Compat)	38	4.61	.40	.411	.432*	1.000				
Top management support(TMS)	38	4.98	.36	.330	.412	.348	1.000			
HRIS expertise(HR EX)	38	4.89	.32	.260	.433*	.340	.916**	1.000		
Competition(Compet)	38	4.17	.55	.369	.240	.519*	.083	-1.12	1.000	
Decision to adopt HRIS(Dta HRIS)	38	4.71	.707	.437*	.500*	.394	.457*	.416*	.395	1.000

\*p < 0.05 \*\* p < 0.01

Correlation analysis is used to explain the intensity and significance of relationship between all hypothesized variables in this study.

Hypothesis 1 suggests that “Perceived Relative Advantage will positively contribute to Decision to Adopt HRIS”. Correlation result shows that Relative Advantage (0.437\*, p 0.032) is a very strong and significant contributor towards Decision to Adopt HRIS. Hence, Hypothesis 1 is strongly supported. Hypothesis 2 predicts that “Perceived Compatibility of any HRIS innovation will be positively related to Decision to Adopt HRIS”. The correlation coefficient shows that Compatibility (0.500\*, p 0.019) is also positively related to Decision to Adopt HRIS. Therefore, Hypothesis 2 is supported. This finding highlights that if the incoming HRIS adoption is perceived to be compatible to the existing organization system and does not entail system disruption, then such HRIS has better chances to be adopted by that organization.

Hypothesis 3 predicts that “Perceived complexity of an HRIS innovation will be negatively related to HRIS adoption”. The correlation coefficient shows that Complexity is not negatively related to Decision of HRIS Adoption and result is not significant. Therefore, Hypothesis 3 is not supported by the correlation analysis. It highlights that if the incoming HRIS is perceived to be complex by organization members, then this complexity becomes a hindrance in the way of successful adoption of HRIS by that organization. Hypothesis 4 predicts that “Top Management Support will be positively related to Decision to Adopt HRIS”. Table 4 shows that Top Management Support (0.457\*, p 0.056) has strong relationship with Decision to Adopt HRIS and it is significantly and positively related to Decision to Adopt HRIS. This correlation result shows that out of the all contributors considered in this research, top management support comes out to the biggest contributor towards adoption of HRIS innovations in any organization. The finding of this study highlights that top management support will give a chance to HRIS adoption in any organization. Conversely, if the top management is not convinced about the need and applicability of HRIS in any organization, then they can become the biggest

resistance standing in the way of HRIS adoption.

Hypothesis 5 suggests that “HRIS Expertise will be positively related to Decision to Adopt HRIS”. The correlation values shows that HRIS Expertise (0.416\*, p 0.054) has moderately strong and significant relationship with Decision to Adopt HRIS. Therefore, Hypothesis 5 is supported. The correlation analysis highlights that the existing HRIS expertise in any organization can indeed serve as a big support towards adoption of HRIS in that organization.

Hypothesis 6 predicts that “Perceived level of Competition will not be threat to the existing expertise levels of concerned employees in the organization. It is positively related to HRIS adoption in an organization”. The correlation value shows perceived level of competition in the industry (0.395, p 0.075) is positively related to Decision to Adopt HRIS. Therefore, Hypothesis 6 is also supported by the correlation analysis, although this correlation is not very strong. The finding from the correlation analysis analyses that competition in any industry does become a big factor in pushing organizations to adopt HRIS innovations to gain competitive relative advantage against the rival organizations.

### Findings

Organizations, having adopted HRIS, are utilising its benefits of HRIS. In the early stage of introduction of HRIS, HRIS not to improve the quality of work was the perception of the employees and employer of the organisation. Now-a-days, majority of the workers in the organisation have an opinion of HRIS to bring improvement in quality of work of human resource personnel, to make the completion of HR tasks easier, to save time and to manage information efficiently.

HRIS, adopted by the organisations, provides required information for decision making as and when required. A significant utilization of HRIS supports in decision making regarding human resource personnel. Interestingly, contrary to the traditional perception that HRIS was expensive investment, the findings of this

study indicates that respondents are well aware of HRIS to reduce the operational costs.

This study has revealed certain difficulties while adopting HRIS in the organisation. Lack of awareness and limited knowledge and natural resistance to innovation adoption have prevented the management in using HRIS. Moreover, employees were reluctant to learn the innovation. Unless the top management provides incentives to employees to learn and adopt HRIS, there will be natural resistance to adopt new technology among the employees of the organisation. Another interesting finding from this study is that majority of the respondents are ready to integrate HRIS into current operations as all human resource personnel are computer literate and HRIS experts are present in all organizations. Moreover, every organization likes their employees as having the best competent employees in field of computers. The study shows that HRIS adoption to bring into the existing system is compatible with existing operations. Therefore, adoption of HRIS should be considered positively.

The consistency of organizational values and beliefs between existing system and HRIS are confirmed by majority. Moreover, IT structure of organization and the computerized data resources are considered fully compatible with HRIS. The major role of the top management in adopting HRIS is not only in terms of allocation of adequate human, financial and physical resources, but also time and commitment. The training of employees is also dependent on encouragement of top management. However, organizations are adopting HRIS due to internal as well as external competitive pressure, while few even admits on inquiring about competitor's technological innovations.

### Conclusion

HRIS should not be considered as an expense but it should be taken as an investment. HRIS packages with less functionality could be costly. The cost of infrastructure to be installed for the implementation of HRIS is also significant in monetary terms. It is concluded that Relative Advantage and Compatibility are positively related to adoption of HRIS. Top Management Support and HRIS Expertise are found to contributors to the decision of HRIS adoption.

### Recommendations

It is recommended that organizations should opt for new technologies. It would cut the cost of operating human resource department. It would also increase the efficiency of the human resource section. Quality work would be done in lesser time. High cost incurred on implementation of HRIS would be justified. It is highly recommended that the organizations not having human resource information systems must adopt the latest systems after having HRIS expertise in organisation.

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