

A Study on HRIS Budget and its Impact on HRIS Effectiveness

Tejpal Singh Batra

Research Scholar - Neville Wadia Institute of Management Studies & Research

Dr. Rasika Patil

Guide - Neville Wadia Institute of Management Studies & Research

Abstract

Purpose – The emergence of disruptive technologies has facilitated the use of Human Resource Information System (HRIS) by HR for talent acquisition and development. However, the rise of hybrid and work-from-home work culture in the post-COVID era has posed challenges in delivering seamless HR services to employees at right cost. To overcome this, the objective of this study is to examine how a constituted HRIS budget can enhance overall HRIS effectiveness and benefit the organization. Additionally, this paper explores the different facets of HRIS budget and how they impact overall HRIS effectiveness.

Design/methodology/approach – The research was conducted using a survey of 96 participants and descriptive analysis and, non-parametric tests was used to analyse the data.

Findings – The findings of the study suggest that HRIS budget has a significant positive impact on HRIS effectiveness. These findings have practical implications for HR professionals and organizations, highlighting the importance of focusing more on what should constitute as part of the HRIS budget that would lead to more effective and efficient HRIS.

Research limitations/implications – This paper contributes to the understanding of the impact HRIS budget has on the HRIS effectiveness and which are the contributing factors.

Originality/value – The findings extend the discussions regarding the impact adequate HRIS budget has on overall HRIS effectiveness and how the findings can be used by the organization to focus on how and where to spend to make their HRIS more effective.

Keywords HRIS, HRIS budget, HRIS effectiveness, HR, IS, budget.

Introduction

Human Resource Information Systems (HRIS) have become an essential tool for managing human resources in organizations. An HRIS is a software solution that enables organizations to manage their HR processes and data more efficiently, accurately, and cost-effectively. The adoption of HRIS has grown significantly over the years due to the need for organizations to keep up with the demands of an evolving workforce in a fast-paced and competitive business environment. Previous research has highlighted the importance of HRIS in enhancing HRM practices and improving overall organizational performance. A study by Iqbal et al. (2021) found that HRIS has a positive impact on organizational performance, especially in terms of employee productivity, employee satisfaction, and organizational commitment. Another study by DeSa et al. (2020) reported that HRIS can significantly reduce the time and cost of HR

processes, enabling HR professionals to focus on more strategic tasks such as talent management, performance management, and employee engagement.

Despite the many benefits of HRIS, some studies have suggested that the effectiveness of HRIS depends on various factors such as the budget allocated to it. For example, a study by Haried (2018) found that budget constraints negatively impact the effectiveness of HRIS. Another study by Ata and Tarique (2021) reported that a higher budget allocation for HRIS would improve its effectiveness. Singh, B. (2017). Impact of HRIS budget on its effectiveness: An empirical study. *Journal of Management Research*, 17(2), 92-106. In this study, the author found that budget allocation for HRIS significantly impacts its effectiveness in terms of data accuracy, accessibility, and timeliness.

An HRIS budget refers to the amount of financial resources allocated to acquiring, implementing, and maintaining a Human Resource Information System (HRIS) in an organization. It includes the costs of purchasing HRIS software, hardware, and related infrastructure, as well as ongoing expenses for training, support, and system upgrades. A well-designed HRIS budget is crucial for ensuring the effectiveness of the system and maximizing the return on investment. It helps organizations manage HR processes and data more efficiently, accurately, and cost-effectively, leading to improved employee performance, productivity, and satisfaction, as well as overall organizational success.

Additional studies also support the need to focus on the HRIS budget. Jha, S., & Singh, S. K. (2018). An exploratory study on the role of HRIS budget in enhancing HRM practices. *International Journal of Engineering & Technology*, 7(3.21), 48-51. The study revealed that HRIS budget allocation has a positive impact on HRM practices and contributes to the efficient and effective management of employee data. Tiwari, P., & Yadav, M. (2019). The effect of budget allocation on the effectiveness of HRIS: A study of Indian companies. *Journal of Human Resource Management*, 7(1), 25-36. This study found that HRIS budget allocation significantly impacts its effectiveness in terms of improving HR processes, reducing administrative workload, and enhancing employee satisfaction. Stanišić, S., Vukmirović, Đ., & Milovanović, J. (2020). The impact of budget constraints on HRIS implementation success: Evidence from European SMEs. *International Journal of Business and Information*, 15(3), 311-330. The study revealed that budget constraints have a negative impact on the success of HRIS implementation in SMEs, leading to reduced efficiency, poor data quality, and lower employee satisfaction.

Therefore, this study aims to examine the impact of the HRIS budget on its effectiveness in enhancing HRM practices and overall organizational performance. The study will investigate the relationship between HRIS budget and HRIS effectiveness using a quantitative research design via the following research question.

Research Question: How does budget allocation impact the effectiveness of an HRIS?

Objective: To investigate the relationship between budget allocation and the effectiveness of our organization's HRIS.

Hypothesis 1: A higher budget allocation for HRIS would improve its effectiveness.

Hypothesis 2: Budget constraints have negatively impacted the effectiveness of HRIS.

Hypothesis 3: The current budget allocation is sufficient to support HRIS's current functioning.

Hypothesis 4: The effectiveness of an HRIS is directly related to the budget allocated to it.

The findings of this study will contribute to the existing literature on HRIS and provide practical insights for organizations on how to allocate their budget for HRIS effectively.

Method

We used a form-based survey to launch and conduct this research. Quantitative research is used in this work. Given that respondents were chosen from a list of LinkedIn contacts, the convenience sample of 96 Indian HR workers is made up of these individuals. Scales taken and modified from other studies are included in the instrument used in this research. Few of the existing scales or instruments used were HRIS budget satisfaction scale, which measures employees' satisfaction with the budget allocated for their HRIS. HRIS effectiveness scale, which measures the effectiveness of HRIS in an organization. System Usability Scale (SUS) is a which measure the ease of use of software systems. HRIS Functionality Scale is another instrument that measures the perceived functionalities of an HRIS system. Some earlier studies are Chen, C. J., & Huang, J. W. (2009). Strategic human resource practices and innovation performance--The mediating role of knowledge management capacity. *Journal of business research*, 62(1), 104-114. Lawless, M. W., Anderson, N., & Strudwick, K. (2017). Impact of human resource information systems on HRM practices and organizational outcomes. *Journal of Organizational Computing and Electronic Commerce*, 27(2), 106-123. Lee, M., Lee, K., Lee, D., & Choi, B. (2014). The impact of HRIS on HRM effectiveness: An empirical study in Korea. *International Journal of Human Resource Management*, 25(14), 2035-2052. Sabherwal, R., & Sabherwal, S. (2015). The business value of information technology: A study of electronic data interchange. *Journal of Management Information Systems*, 32(1), 113-148. Shen, J., & Liu, C. H. (2011). Impact of HRIS on firm performance through knowledge management: A structural equation model. *International Journal of Human Resource Management*, 22(11), 2195-2217.

A five-point Likert scale was used to score each topic (ranging from 1 to 5). The research did not include any additional demographic factors. Google Forms was used to make the poll accessible. Using the Real Statistics add-in for Excel and SPSS software, the quality of the data was processed and examined after data collection. As the data is non-parametric, reliability was checked using the Guttman test. Finally, the construct validation was done using spearman's rho. Hypothesis testing was done using Chi-Square, and Kruskal-Wallis Test.

Results

Hypothesis 1: A higher budget allocation for HRIS would improve its effectiveness.

The hypothesis being tested was whether a higher budget allocation for the HRIS would improve its effectiveness. The study collected data from 96 participants, who were asked to rate their agreement with various statements about their organization's HRIS budget and its effectiveness on a 5-point Likert scale. The data was then analyzed using a chi-square test, which measures the association between two categorical variables. The results of the chi-square test showed a significant association between HRIS budget and effectiveness (Pearson's chi-

squared = 34.077, $p < 0.05$). This indicates that the null hypothesis (there is no association between HRIS budget and effectiveness) can be rejected. The Cramer's V statistic, which measures the strength of the association, was found to be 0.298, indicating a moderate effect size. In other words, the study found that a higher budget allocation for the HRIS is associated with improved effectiveness. This suggests that organizations should consider investing more in their HRIS budget to improve the system's effectiveness and ultimately benefit the organization as a whole. This finding supports H1, as shown in Figure 1.

Chi-Square Test					
SUMMARY			Alpha	0.05	
Count	Rows	Cols	df		
96	5	5	16		
CHI-SQUARE					
	chi-sq	p-value	x-crit	sig	Cramer V
Pearson's	34.07727	0.005304	26.29623	yes	0.297897
Max likelih	35.79558	0.003089	26.29623	yes	0.305316

Figure 1

Hypothesis 2: Budget constraints have negatively impacted the effectiveness of HRIS. This hypothesis aimed to determine whether budget constraints have negatively impacted the effectiveness of the HRIS. The variables used in this hypothesis were "Overall, I am satisfied with the effectiveness of our organization's HRIS" and "The effectiveness of an HRIS is directly related to the budget allocated to it." The results of the Chi-Square test showed a significant relationship between budget constraints and HRIS effectiveness, with a Pearson's chi-square value of 48.99 and a p-value of 3.32E-05. The Cramer's V value of 0.36 indicates a moderate effect size, suggesting that budget constraints have a negative impact on the effectiveness of HRIS. These findings are in line with previous research studies, such as Haried's (2018) study that found budget constraints to have a negative impact on HRIS effectiveness. This finding supports H2, as shown in Figure 2.

Chi-Square Test					
SUMMARY			Alpha	0.05	
Count	Rows	Cols	df		
96	5	5	16		
CHI-SQUARE					
	chi-sq	p-value	x-crit	sig	Cramer V
Pearson's	48.98881	3.32E-05	26.29623	yes	0.357176
Max likelih	49.2592	3.01E-05	26.29623	yes	0.358161

Figure 2

Hypothesis 3: The current budget allocation is sufficient to support HRIS's current functioning. Based on the Kruskal-Wallis test with a p-value of 0.000114451 and a significance level of 0.05, we can reject the null hypothesis and conclude that there is a significant difference in the perception of the effectiveness of the HRIS budget among the employees. Specifically, the

finding shows that the median rating for "The budget allocated for our organization's HRIS is sufficient to support its effective functioning" is 3, indicating a neutral perception. Meanwhile, the median ratings for the other statements are mostly below 3, suggesting that the employees have a slightly negative perception of the HRIS's features, functionalities, and ease of use. Therefore, the organization may need to consider improving the HRIS and addressing the employees' concerns to maximize its effectiveness and efficiency. Additionally, re-evaluating the HRIS budget allocation may also be necessary to ensure that it can support the organization's current and future needs. This finding partially supports H3 with an indication to focus on effectiveness and efficiency before adding more to the budget, as shown in Figure 3.

Kruskal-Wallis Test								
	The HRIS in our organization is regularly upgraded or updated to ensure optimal performance.	Our HRIS meets the needs of our organization effectively.	The features and functionalities of our HRIS are adequate for our organization's needs.	The HRIS is easy to use and navigate for our organization's employees.	The HRIS has improved the efficiency of HR tasks in our organization.	Overall, I am satisfied with the effectiveness of our organization's HRIS.	The budget allocated for our organization's HRIS is sufficient to support its effective functioning.	
median	2	2.5	3	2	2	2.5	3	
rank sum	32444	34704	36438	26546	27118	34252	34626	
count	96	96	96	96	96	96	96	672
r ² /n	10964720.17	12545496	13830498.38	7340522.042	7660270.042	12220828.17	12489165.38	77051500.17
H-stat								25.45712605
H-ties								27.5445881
df								6
p-value								0.000114451
alpha								0.05
sig								yes

Figure 3

Hypothesis 4: The Kruskal-Wallis Test was conducted to evaluate the variables related to the HRIS in the organization. The median scores of the variables ranged from 2 to 3, indicating moderate to a high agreement among the respondents. However, the H-statistic value of 24.767 and the p-value of 0.000159586 suggest that the null hypothesis of there being no difference in the ratings of the variables can be rejected. Therefore, it can be concluded that there is a significant difference in the perception of the HRIS in the organization based on the variables evaluated.

Among the variables, the feature and functionalities of the HRIS received the highest median score of 3, while the HRIS being easy to use and navigate for employees received the lowest median score of 2. The variable "The effectiveness of an HRIS is directly related to the budget allocated to it" also received a median score of 3, indicating that the respondents believe budget allocation is an important factor in the effectiveness of the HRIS.

Additionally, the rank sum values show that the highest-ranked variable is "The features and functionalities of our HRIS are adequate for our organization's needs" with a rank sum of 36382, followed closely by "Our HRIS meets the needs of our organization effectively" with a rank sum of 34704. These findings suggest that the HRIS features and functionalities are perceived to be essential in meeting the organization's needs effectively.

Therefore, it is recommended that appropriate budget allocation is made to ensure optimal performance of the HRIS in meeting the needs of the organization, particularly in enhancing

its features and functionalities to meet the organization's needs effectively. This finding supports H3.

Kruskal-Wallis Test									
	The HRIS in our organization is regularly upgraded or updated to ensure	Our HRIS meets the needs of our organization	The features and functionalities of our HRIS are adequate for our organization's	The HRIS is easy to use and navigate for our organization's	The HRIS has improved the efficiency of HR tasks in our	Overall, I am satisfied with the effectiveness of our	The effectiveness of an HRIS is directly related to the budget allocated to it.		
median	2	2.5	3	2	2	2.5	3		
rank sum	32438	34704	36382	26632	27182	34234	34556		
count	96	96	96	96	96	96	96		672
r ² /n	10960665.04	12545496	13788020.04	7388160.667	7696470.042	12207987.04	12438720.17		77025519
H-stat									24.76775101
H-ties									26.77458656
df									6
p-value									0.000159586
alpha									0.05
sig									yes

Figure 4

Discussion

The findings, with one exception, support the study's hypothesis. Also, it shows how the HRIS Budget and HRIS Efficiency are related.

In hypothesis H1 testing the conclusion is that increasing the budget allocated for HRIS is linked with enhanced effectiveness. This implies that organizations should contemplate investing more in their HRIS budget to enhance the system's effectiveness, which will ultimately be advantageous for the organization as a whole. This finding is consistent with Zhang, Y., & Li, H. (2017). Examining the relationship between human resource information system (HRIS) functionalities and HRIS success. *Information Technology and Management*, 18(4), 339-351.

Hypothesis H2 testing revealed that there is a significant relationship between budget constraints and HRIS effectiveness, indicating that budget limitations negatively affect HRIS's effectiveness. This finding is consistent with previous research studies that have also reported a negative impact of budget constraints on HRIS performance. For instance, Smith's (2020) study found that companies with lower HRIS budgets had lower levels of HRIS effectiveness compared to those with higher HRIS budgets. This finding is consistent with Smith, T. A. (2020). The effect of the human resource information systems (HRIS) budget on HRIS effectiveness. *International Journal of Human Resource Studies*, 10(3), 1-15.

Hypothesis H3 test revealed that the organization should take steps to address employee concerns and improve the HRIS to optimize its efficiency and effectiveness. Furthermore, it may be necessary to re-evaluate the HRIS budget allocation to ensure that it aligns with the organization's present and future requirements. These results partly support H3, which highlights the importance of prioritizing effectiveness and efficiency before increasing the budget allocation. This finding is consistent with Swarnalatha, C., & Marimuthu, M. (2021). An empirical investigation of the antecedents and outcomes of HRIS effectiveness: A study in the Indian context. *International Journal of Human Resource Management*, 1-29.

Hypothesis H4 test was conducted to determine the relationship between the effectiveness of the HRIS in an organization and various factors. The factors assessed include regular upgrades and updates to ensure optimal performance, meeting the needs of the organization, features,

and functionalities being adequate, ease of use and navigation for employees, and improvement in HR tasks efficiency. The results indicated a significant relationship between these factors and the effectiveness of the HRIS. Furthermore, it was concluded that the budget allocated to an HRIS is directly related to its effectiveness.

The four hypotheses investigated the relationship between HRIS budget allocation, budget constraints, and HRIS effectiveness. H1 found that increasing the HRIS budget is associated with enhanced effectiveness, suggesting organizations should invest more in their HRIS budget. H2 revealed that budget constraints negatively affect HRIS effectiveness, consistent with previous studies. H3 emphasized the importance of addressing employee concerns and optimizing HRIS efficiency before increasing the budget allocation, implying that re-evaluating the HRIS budget may be necessary to align with organizational requirements. H4 emphasized on budget allocation and its direct impact on HRIS effectiveness. Overall, the findings suggest that increasing budget allocation does improve HRIS efficiency but at the same time improving HRIS effectiveness and efficiency should be a priority.

In conclusion, these findings highlight the impact the HRIS budget has on HRIS effectiveness and hence the need to better plan the HRIS budget. The study also highlights the need to keep HRIS efficiency and effectiveness in mind while planning for and allocating a budget for HRIS. Management should keep both these aspects in mind to ensure a better return on investment and employee satisfaction. The study also suggests that future research should explore further to get an enhanced understanding of the complex relationship between HRIS budget and HRIS efficiency.

The study also suggests that future research should explore other factors that may influence HRIS effectiveness beyond just efficiency and be ready for now and future needs. (Dr. C. Madhavaiah et al 2012)

Final remarks, limitations, and suggestions for future studies

Although the HRIS budget and its impact on HRIS effectiveness have been widely explored in the literature (Gupta, R., & Sharma, V. 2016, Bhatnagar, J., & Srivastava, K. 2018, Singh, P., & Singh, R. K. 2019) the role of HRIS budget, its current sufficiency, impact on HRIS efficiency and effectiveness, were not fully examined. This study examined all these aspects and tried to give a comprehensive overview.

Furthermore, the study suggests that HRIS budget planning that focuses on improving the effectiveness and efficiency of HRIS processes can lead to increased employee engagement and satisfaction. However, the study also acknowledges that more research is needed to gain a deeper understanding of the relationship between HRIS efficiency and effectiveness and HRIS budget.

Overall, the study emphasizes the need of having the right HRIS budget to get an efficient and effective HRIS, that can help both employees as well as the organization. This study also offers useful recommendations for enhancing HRIS effectiveness and efficiency and how HRIS budget can be a key factor. Further research in this area can be built on the study's findings.

The crucial point to remember about this study is that it has limits in addition to offering helpful recommendations and insights. Notably, despite the 96-person sample size, it is not possible to

extract fully generalizable findings about the population being studied. This study did not contain demographic data, which may be incorporated in follow-up research. To gain a deeper understanding, future research should compare organizations of similar sizes to get a more in-depth understanding of the budget impact on HRIS implementation.

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