**Scholars Journal of Economics, Business and Management** OPEN ACCESS
Abbreviated Key Title: Sch J Econ Bus Manag
ISSN 2348-8875 (Print) | ISSN 2348-5302 (Online)
Journal homepage: https://saspublishers.com

# Effect of the Adoption of Human Resource Information System (HRIS) and Technology on Organization Performance

Akanbi, F. K[1*], Lawrence, B.A[2]. Adetunji, A. T[3]

[1]Department of Business Administration, Faculty of Management Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State. Nigeria
[2]Department of English Language, Ignatius Ajuru University, Rivers State, Port Harcourt
[3]Business Administration Department, Adeleke University, Ede

**DOI:** https://doi.org/10.36347/sjebm.2026.v13i06.001 | **Received:** 17.09.2025 | **Accepted:** 13.11.2025 | **Published:** 03.06.2026

***Corresponding author:** Akanbi, F. K
Department of Business Administration, Faculty of Management Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State. Nigeria

**Abstract** **Original Research Article**

In today's dynamic and technology-driven academic environment, the effective management of human resource is pivotal to institutional performance. This study investigates the impact of Human Resource Information Systems (HRIS) adoption on organizational performance in two Nigerian state universities. Grounded in the Diffusion of Innovations (DOI) theory, the research explores how HRIS integration influences productivity, employee satisfaction, and operational efficiency. A mixed-methods approach was adopted, combining quantitative survey data with qualitative insights from HR personnel from two (2) state universities. Using descriptive statistics, Z-tests, and regression analysis, the findings reveal a statistically significant positive relationship between HRIS adoption and key performance indicators. Specifically, HRIS adoption improves data accuracy, enhances decision-making, streamlines HR processes, and increases employee morale and institutional agility. Despite challenges such as implementation costs and resistance to change, the study concludes that HRIS is not only an administrative tool but a strategic asset essential for institutional sustainability. It recommends the prioritization of robust HRIS frameworks, continuous user training, and integration with other institutional systems to optimize performance outcomes in higher education and similar organizational contexts.

**Keywords:** Diffusion of Innovations (DOI), Human Resource Information Systems (HRIS), Institutional Efficiency, Organizational Performance.



## INTRODUCTION

In the digital age, businesses are under more pressure than ever to make their operations more efficient, make better decisions, and stay competitive in a business world that changes quickly. Hendrickson (2003) says that HRIS is a set of systems that work together to collect, store, and analyze data about a company's employees. Integrating technology into human resource (HR) processes has made Human Resource Information Systems (HRIS) a key tool for reaching these goals. HRIS uses both traditional HR functions and information technology to make operations run more smoothly, manage data better, and make strategic decisions.

The evolution of HR practices from manual, paper-based systems to sophisticated, automated platform reflects the growing emphasis on data-driven approaches in managing human capital. Today, HRIS facilitates critical functions such as recruitment, payroll, performance appraisal, training, and employee engagement, enabling organizations to align their workforce strategies with broader business goals. This technological transformation not only improves efficiency but also positions HR as a strategic partner in achieving organizational success.

The role of HRIS in enhancing organizational performance is underscored by its ability to provide accurate, real-time data for decision-making, foster compliance with regulatory requirements, and improve employee satisfaction through transparent and efficient processes. Organizations that adopt HRIS can better anticipate workforce trends, reduce operational costs, and increase agility in responding to market challenges.

Despite its numerous benefits, the adoption of HRIS is not without challenges. High implementation costs, resistance to change among employees, and inadequate technical expertise often hinder its successful deployment. Moreover, organizations must navigate the complexities of selecting the right HRIS solutions that align with their unique needs and scalability requirements.

This study examines the adoption of HRIS and its implications for organizational performance. By exploring the opportunities and challenges associated with HRIS implementation, the study seeks to provide insights into how organizations can maximize the benefits of HR technology to achieve sustainable performance improvements.

In today's competitive and technology-driven environment, organizations are under constant pressure to enhance efficiency, streamline operations, and improve decision-making to achieve sustainable performance. Human Resource Information Systems (HRIS) offer a comprehensive solution by integrating technology into HR functions, enabling organizations to manage their human capital more effectively. However, despite the growing recognition of HRIS's potential, its adoption and implementation remain uneven across industries and organizations.

A significant problem lies in the gap between the availability of HRIS technologies and their effective utilization in driving organizational performance. Many organizations struggle to align HRIS adoption with their strategic goals due to challenges such as high implementation costs, resistance to change, inadequate technical expertise, and a lack of organizational readiness. Additionally, there is limited empirical evidence on how HRIS adoption directly influences key performance metrics such as productivity, employee satisfaction, and cost efficiency, leaving decision-makers uncertain about its tangible benefits.

Furthermore, existing literature primarily focuses on the technical aspects of HRIS, often neglecting its strategic implications and the role of organizational culture and leadership in ensuring successful adoption. This gap hinders a comprehensive understanding of how HRIS can be leveraged to enhance organizational performance in various contexts.

This study examines the adoption of HRIS and its implications for organizational performance. By exploring the opportunities and challenges associated with HRIS implementation, the study seeks to provide insights into how organizations can maximize the benefits of HR technology to achieve sustainable performance improvements. This research aims to bridge the gap between technology adoption and strategic HR outcomes, providing actionable insights for organizations to optimize their HRIS implementation strategies.

The general objective of this study is to examine the adoption of HRIS and its implications for organizational performance while specific objectives are;

i. to explore the strategic role of HRIS in streamlining HR processes in modern organizations.
ii. to evaluate the applications and utilities of HRIS.
iii. to highlights how HRIS integrates technology into core HR functions in the organization.

Hypothesis

H0: Effective HRIS has no significant impact on organizational productivity.

## LITERATURE REVIEW

### Human Resource Information System (HRIS)

For human resource management, it is very important that the company can get, store, maintain, and use personnel information. This is because the quality of the information is very important for making plans for company activities. HR managers and line managers can get all the information they need to make decisions about hiring, promotions, payroll, or development using an HR information system (Liu, Qingping, and Liu, 2021).

Every business has a way to gather and keep data about Human resource, turn that data into information, and send that information to users. The Human Resource Information System (HRIS) is the name of this application (Esangbedo, Bai, Mirjalili, and Wang 2021).

Human Resource Information System is "a systematic procedure for collecting, storing, maintaining, retrieving and validating various specific data needed by an organisation regarding its human resource, personnel activities and work unit characteristics (Elshaer, Azazz, and Fayyad, 2023). By definition, the HR Information System manages specific personnel data, not all data that may be available. The usefulness of storing all the data may not equal the costs that must be incurred. In addition to personnel data, HR Information Systems usually include various data about organisations and jobs (Sari, Hasibuan, Sinambela, and Muda, 2022).

Human Resource Planning: This subsystem is in charge of doing special studies to gather information about the company's human resource. It does this in two steps: first, it assesses the current human resource, and second, it meets the future human resource needs. It helps HR managers make sure they have the right number and types of capable people in the right places and at the right times. Human Resource planning is a

process of analysing and simulating HR needs based on the organization's strengths and weaknesses, which are then linked to plans for the development of future departmental activities. This affects the hiring of human resource or the placement of human resource in a location or unit that needs it (Prasilowati, Farouk, and Ahamadi, 2021).

ii. Recruiting and Selection: This part keeps track of information about hiring and choosing people, such as the cost and method of hiring and choosing people and how long it takes to fill a position. It also makes sure that users get the information they need on time.

iii. Personnel Administration—This is the most basic step in gathering information about the personnel system. It gathers information about the completeness or complement of the general administration process related to personnel. It includes the process of recording general personnel data (Shen, Li, Zhou, Jiang, and Bao, 2023).

iv. Compensation and Benefits - The process of determining salaries and transactions, which includes the process of using 'merit payments' in determining salaries and other income related to additional income such as overtime, meal allowances, housing allowances, remote area incentives, supervisors and the like. ii. Providing facilities related to needs outside the scope of work aims to guarantee a sense of security while working at the company, such as health facilities and retirement savings (Daly, Hughson, and Loutzenhiser, 2021).

v. Performance Appraisal - It gives information about the performance of each employee, such as the due date of the appraisal and the scores. A good way to evaluate employee performance is through assessment and feedback. When doing the assessment, management uses the criteria that have already been set. Also, based on the results of the study, which are usually done by a team, this can be shared and talked about with the employees to help them understand the assessment process and what is expected of them in their work. It is hoped that a staffing system can get a more objective evaluation system, which is based on the facts found. before (Tumsekcali, Ayyildiz, and Taskin, 2021).

vi. Training and Learning Management: Education is one of the ways that employees can help their departments succeed in their organisational units. This system helps organisations manage and keep track of employee training and development efforts. Advanced learning management systems let managers approve training, budgets, and calendars along with performance management and appraisal metrics.

vii. Termination of Employment or Retirement—There needs to be a way to handle things that come up when an employee's time with the company is over, whether it's because they are retiring or for other reasons. The system keeps track of all the information about the employees who have worked for the company, including their rights and obligations, like pensions, severance pay, and so on (Hemberg & Bergdahl, 2020). Krishna and Bhaskar, 2011 summarized the benefits of HRIS as mentioned in Figure 1.


**Figure 1: Overall benefits of HRIS**

HRIS benefits can be categorized as benefits for management, for human resource department and for employees.

Benefits for management - Increase of overall decision-making efficiency, cost reducing and better control of budget, a clear vision of business including business transparency, and sharp insight into the process

of hiring and firing employees, at the aggregate level.

Benefits for human resource department - Possession of single data base of all employees in the company with all necessary information and opportunities of different reports, elimination of paper forms that are much slower and with higher probability of errors, ability to update data bases in real time, on the basis of all changes, which is of extreme importance to regionally diversified companies, minimize errors that are caused by human factor, improved management system in accordance with the legislation, elimination or reduction of redundancy in the system and standardization of business processes.

Benefits for employees – It saves time, the possibility of independent access to data, which often means working in one software window, increasing staff morale, automatic tracking and reminder to business obligations and events, encouraging employees to make decisions and initiatives on the basis of information obtained in the HRIS system, and has the ability to attend internal training courses via the web and the development of personal skills and knowledge.

HRIS also has the potential to fundamentally affect revenue channels, beyond cost reduction and productivity improvements. It may enhance innovation, and speed up time to market for products. In addition, HRIS can fundamentally change the way individuals relate to one another and to their organizations through various communication media.

**Functions of HRIS**

HRIS functions interactively with human resource management systems such as human resource planning, staffing, training, and career development, performance management and compensation management (Kavanagh et al., 1990). The functions can also be categorized as follows;

i. Create and maintain employee record: The data being entered create an employee record and this record is maintained throughout employment. In most of the organizations the HRIS administrator is responsible for creating and maintaining these records.
ii. Ensure legal compliance: Data entered into the HRIS can be used to help the organization comply with government regulations in an accurate and timely fashion. Ensuring data integrity and accuracy is very important and a key responsibility of human resource professional.
iii. Human resource planning and forecasting: Information from recruitment, training and development, and administrative subsystems, such as number of open positions, types of positions, employee skills and competencies, job rates, retirement eligibility and employee turnover rates can be used to help managers develop long range staffing plans and provide valuable information to the human resource professionals.
iv. Talent management/Knowledge management: The data that are entered into the system, such as skills, competencies, jobs held, training and employee development interests, can be used to help managers provide development opportunities for their employees, ensure that the appropriate employees are offered positions that will enhance their skills, provide the appropriate training for employees so that they can advance in the organization, and highlight an employee's interests and development paths. This information will help human resource professionals to provide more targeted advice and counsel to managers to create a development plan that meets organizational and employee needs.
v. Strategic alignment: Information from the system can help organizations align human resource activities more effectively with their strategic plan.
vi. Enhanced decision making: The ability to extract data from the HRIS and use these data not just to create information but also to improve the quality of management decision has become increasingly important. Information needs to be relevant, useful, timely and accurate.

**Organizational Performance**

Organisational performance is how well an organisation can use its resources to reach its goals quickly and effectively. It includes a range of results, such as financial and non-financial metrics, that show how well the organisation is doing at reaching its strategic goals. Performance is not one-dimensional; it can be measured at different levels, like the individual, the department, or the whole organisation. When it comes to adopting an HRIS, better decision-making, smoother HR processes, happier employees, and reaching strategic goals like productivity and compliance are all things that are often linked to better organisational performance.

**Theoretical Underpinning**

The Diffusion of Innovations (DOI) serves as the theoretical foundation for this research. DOI Theory, proposed by Everett Rogers (1962), provides a framework for understanding how new ideas, technologies, or practices spread within a social system over time. In the context of HRIS adoption, this theory explains how organizations and their members adopt and integrate HR technology into their workflows, highlighting the factors influencing the rate and success of adoption. DOI emphasizes that the attributes of the innovation itself significantly influence adoption. It classifies individuals or organizations based on their willingness to adopt innovations and adoption is

facilitated through effective communication channels, including formal training sessions, peer discussions, and technology demonstrations. Clear and transparent communication helps reduce uncertainty and builds trust in HRIS adoption. By applying the principles of DOI, organizations can facilitate smoother transitions, ensure faster adoption, and maximize the impact of HRIS on organizational performance.

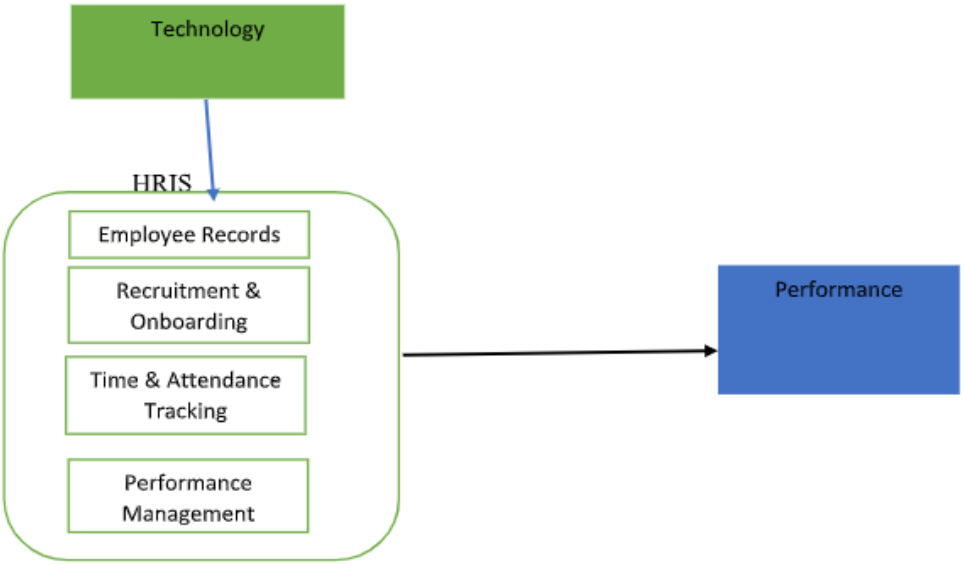


**Fig. 2: Conceptual framework, 2026**

## METHODOLOGY

This study used both qualitative and quantitative research designs, and surveys and interviews were used to collect data. The information that is collected is carefully chosen to make sure it is relevant to the research goals and that it was done using concepts and technical methods. The research is written in a step-by-step format to make it easier for the reader to understand and to help the researcher or explorer understand the process better. This population of the study is made up of the employees of two state universities: Osun State University and Ladoke Akintola University of Technology in Ogbomoso, Oyo State. The population includes all the staff in the registry department, which includes administrative officers, faculty officers, and admission officers. There is a total of 104 people in this group. The study uses a simple random sampling method to choose 21 staff members from each university. At the end of the process, 42 staff members were chosen to be the study's sample size. To make the sample size smaller and easier to handle, the following expression was used:

n= N

1+N(*e*2)
Where:
n= Sample size
N= Total population
e= error term
1693
Therefore;
Given that N = 42 (as stated above), and e is assumed to be 5%
Then sample size,
n= 42
1+42 (0.052)
= 38

### METHOD OF DATA ANALYSIS

The researcher looked at the study's data by counting how often things happened and finding the average scores. A total of forty-two (42) questionnaires were sent out. Forty (40) were filled and sent back, but four (4) were taken out because they were not filled out correctly. So, for the analysis, thirty-six (36) questionnaires were used.

## RESULTS AND DISCUSSION

**Table 1: Distribution of Questionnaire**

| Nature | No. of Respondents | Percentage (%) |
|---|---|---|
| No. Distributed | 42 | 100 |
| Completed and returned | 40 | 95.2 |
| Unreturned | 2 | 4.7 |
| Not suitably completed and removed | 4 | 9.5 |
| Total Used | 36 | 85 |

**Source: Fieldwork Survey, 2026**

**Table 2: Demographic Information of Respondents**

| Variable | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 21 | 58.3 |
| Female | 15 | 41.7 |
| **Age** | | |
| Below 30yrs | 6 | 16.7 |
| Above 30yrs | 30 | 83.3 |
| **Marital status** | | |
| Single | 8 | 22.2 |
| Married | 28 | 77.8 |
| **Academic qualification** | | |
| OND | 5 | 13.9 |
| HND | 10 | 27.8 |
| BSC | 15 | 41.6 |
| MSC | 6 | 16.7 |
| **Working experience** | | |
| 1-5yrs | 5 | 13.8 |
| 6-10yrs | 16 | 44.5 |
| 11-15yrs | 15 | 41.7 |

**Source: Fieldwork Survey, 2026**

Summary of data collected using five-point Likert's scale

**Hypothesis**

H0: integration of HRIS has no significant impact on organizational productivity.

In testing this hypothesis, questions 11 to15 contained in the questionnaire were used.

Mean of population (u) = 3 x 30 x 4 = 90

4

Mean of sample (x) =∑ √428 =107

n 4

Standard deviation (α)=∑ $\sqrt{(x-x)^2}$ = √74 = 4.3

N 4

Z = x-u = 107–90 = 17 =7.9

SD 4.3 2.15

√n√4

1695

Decision Rule: Accept the null hypothesis if the estimated value is less than the Z-table value.

Otherwise, reject the null hypothesis and accept the alternative.

**Decision**:

Since the estimated value is greater than the Z-table value (7.9 > 1.98), we reject the null hypothesis and accept the alternative hypothesis (H1) which stated that integration of HRIS has no significant impact on organizational productivity.

**Table 3: Regression Analysis – HRIS Adoption and Organizational Performance**

| Variable | Coefficient | t-Value | p-Value |
|---|---|---|---|
| HRIS Adoption Rate | 0.45 | 4.56 | 0.002 |
| Employee Satisfaction | 0.30 | 3.21 | 0.005 |
| Organizational Efficiency | 0.42 | 5.03 | 0.0001 |

The regression analysis presented in Table 3 provides compelling evidence that the adoption of Human Resource Information Systems (HRIS) has a statistically significant and positive impact on organizational performance. Three key variables were analyzed; HRIS adoption rate, employee satisfaction, and organizational efficiency, all of which yielded meaningful results.

Firstly, the HRIS adoption rate demonstrated a coefficient of 0.45 with a t-value of 4.56 and a p-value of 0.002. This indicates a strong and statistically significant positive relationship between the level of HRIS adoption and organizational performance. In essence, as universities increase their use and integration of HRIS technologies, they tend to experience notable improvements in various performance indicators. This confirms that HRIS plays more than just a supportive role; it is a strategic tool that enhances how institutions function and deliver on their objectives.

Secondly, employee satisfaction was also found to significantly influence organizational performance, with a coefficient of 0.30 and a p-value of 0.005. This implies that HRIS, by streamlining HR processes such as payroll, appraisal, training, and internal communication, positively affects how employees perceive their workplace. Greater satisfaction often results from improved transparency, timely information, and the convenience of accessing personal and institutional data.

These benefits collectively enhance morale, foster trust, and lead to increased engagement, which in turn boosts productivity.

Thirdly, the variable on organizational efficiency yielded a coefficient of 0.42 and a highly significant p-value of 0.0001. This finding suggests that HRIS contributes substantially to improving the internal operations of the universities. With automated data management, accurate record-keeping, and integrated systems, HRIS reduces administrative delays and minimizes errors that typically arise from manual processes. The efficiency gained from these technological interventions enables institutions to reallocate time and resources to more strategic areas, thus enhancing overall effectiveness.

## DISCUSSION OF FINDINGS

The findings of this study affirm the central role of Human Resource Information Systems (HRIS) in enhancing organizational performance, particularly within academic institutions. The regression analysis results indicate a strong positive correlation between HRIS adoption and various performance indicators such as productivity, employee satisfaction, and operational efficiency. These outcomes are consistent with the existing body of literature, which posits HRIS as a transformative technology with both administrative and strategic implications (Hendrickson, 2003; Krishna & Bhaskar, 2011).

Specifically, the study found that HRIS adoption significantly impacts organizational productivity (coefficient = 0.45, p = 0.002). This confirms that the effective use of HRIS—through automation of key HR functions such as recruitment, payroll, and performance management—directly contributes to improved institutional outcomes. Liu, Qingqing, and Liu (2021) underscore this assertion, emphasizing the value of real-time data processing and analytics enabled by HRIS in enhancing managerial decision-making. The empirical evidence in this study supports the argument that robust HRIS platforms enable administrators to efficiently allocate human resource, streamline workflows, and minimize operational costs.

Additionally, employee satisfaction emerged as a significant outcome of HRIS implementation (coefficient = 0.30, p = 0.005). This suggests that when HR processes are digitized, transparent, and easily accessible, employees are more likely to feel engaged and valued. According to Krishna and Bhaskar (2011), HRIS promotes staff morale by empowering employees with independent access to HR services and reducing reliance on paper-based, delay-prone processes. In the context of this study, respondents acknowledged improvements in administrative clarity, timeliness of performance appraisals, and access to training and development initiatives—all facilitated through HRIS.

Organizational efficiency was also significantly influenced by HRIS adoption (coefficient = 0.42, p = 0.0001), reflecting the system's capability to reduce administrative redundancies and enhance procedural compliance. These results echo the findings of Sari *et al.,* (2022), who assert that HRIS facilitates data accuracy, operational consistency, and legal compliance in personnel management. Respondents from the universities reported fewer administrative bottlenecks and faster HR operations, suggesting that HRIS integration supports more agile and data-driven institutional management.

The findings further validate the application of the Diffusion of Innovations (DOI) theory as the study's theoretical framework. According to Rogers (1962), innovations such as HRIS are more likely to be adopted when they demonstrate clear advantages over existing practices. In this case, the universities under study experienced measurable improvements following HRIS adoption, thereby accelerating the diffusion process. Ogunyomi and Bruneel (2020) emphasize that successful HRIS adoption is contingent upon organizational readiness, effective training, and leadership support—all of which were observed among the institutions surveyed.

## SUMMARY AND CONCLUSION

Based on the review of related literature and the findings obtained in this study, it has been clearly established that Human Resource Information Systems (HRIS), along with motivational tools and training, significantly enhance employee effectiveness across various job roles. However, when such information systems are poorly managed, they can give rise to major organizational issues, including confusion, unrest, and crisis. Although this study focuses primarily on state universities, its findings are applicable across different sectors of human endeavour, provided a careful assessment is conducted to determine whether similar challenges exist in those contexts. The value of effective HRIS implementation in an organization can no longer be overstated; its integration is essential for improving organizational productivity. This is particularly true for complex institutions such as universities, where comprehensive processes and activities must be aligned to address critical operational issues. The study concludes that the strategic adoption of HRIS is vital for institutions aiming to enhance efficiency and sustain growth.

In conclusion, the adoption of a well-structured HRIS has a substantial and measurable impact on organizational performance in higher education settings. For HRIS to realize its full potential, institutions must commit to ongoing training, ensure technical support, and develop integrated policies that link HR practices to broader institutional strategies. The findings underscore the urgent need for universities and similar organizations to prioritize HRIS investment—not merely as an operational upgrade, but as a strategic imperative for

sustained institutional effectiveness and workforce development.

**Recommendations and Policy Implementation**

Because of the different results of the study, the following suggestions are made. Not having enough money should not stop the effective use of a human resource management system. State universities and other organisations should make it a priority to get strong Human Resource Information Systems (HRIS) that are tailored to their specific needs. This should include both technical and administrative help to make sure everything works smoothly. Clear policies should be established regarding data entry, management, and access control within HRIS platforms. This will help prevent data mismanagement, promote accountability, and enhance decision-making.

Regular training programs should be organized for HR personnel and other system users to improve their competence in utilizing HRIS tools effectively. This will minimize misuse, enhance data accuracy, and promote user confidence.

HRIS should not operate in isolation. Institutions should explore ways to integrate HRIS with other core business systems such as finance, academic planning, and institutional research to enable holistic decision-making. Regular evaluations and audits of the HRIS should be conducted to identify gaps, security vulnerabilities, and performance bottlenecks. Feedback from staff should be incorporated to guide system improvement.

## REFERENCES


- Akanbi, F.K**.** and Adetunji, A.T. (2019). Information Management: A Catalyst to Organizational Performance Among University Employees. *International Journal of Psychosocial Rehabilitation*, 23(4): pp.1689-1698.
- Daly, S., Hughson, H., & Loutzenhiser, G. (2021). Valuation for the purposes of a wealth tax. Fiscal Studies, 42(3-4), 615-650
- Elshaer, I. A., Azazz, A. M., & Fayyad, S. (2023). Green Management and Sustainable Performance of Small-and Medium-Sized Hospitality Businesses: Moderating the Role of an Employee's Pro-Environmental Behaviour. International Journal of Environmental Research and Public Health, 20(3), 2244.
- Esangbedo, M. O., Bai, S., Mirjalili, S., & Wang, Z. (2021). Evaluation of human resource information systems using grey ordinal pairwise comparison MCDM methods. Expert Systems with Applications, 182, 115151.
- Hendrickson, A.R. (2003) Human Resource Information Systems: Backbone Technology of Contemporary Human resource. *Journal of Labor Research*, 24, 381.
- Hemberg, J., & Bergdahl, E. (2020). Dealing with ethical and existential issues at end of life through co-creation. Nursing ethics, 27(4), 1012-1031.
- Kavanagh, M.J., Gueutal, H.G., & Tannenbaum, S.I. (1990). Human Resource Information Systems: Development and Application. Boston, M.A
- Krishna, C.Y.S, Bhaskar, S.V. (2011). Assessment of support and benefits of HRIS in medium-scale textile industries. International Journal of Research in Economics & Social Sciences, 1 (2), 48-57.
- Liu, P., Qingqing, W., & Liu, W. (2021). Enterprise human resource management platform based on FPGA and data mining. *Microprocessors and Microsystems*, *80*, 103330.
- Ogunyomi, P. O., & Bruneel, J. (2020). HRIS adoption and organizational performance: Evidence from Nigeria. *International Journal of Human Resource Management, 31*(5), 1298-1320.
- Prasilowati, S. L., Farouk, F., & Ahmadi, S. (2021). Determination of Employee Contribution on Employee Engagement with Employee Motivation as an Intervening Variable. *Journal of Hunan University Natural Sciences*, *48*(7).
- Saputra, D. K., Suherman, A., & Kartini, T. (2021). The Influence of Accounting Information Systems and Human resource (HR) Competency of Finance on The Quality of Financial Reports. JASa (Jurnal Akuntansi, Audit dan Sistem Informasi Akuntansi), 5(3), 409-421.
- Sari, A. K., Hasibuan, R. P. S., Sinambela, A. P., & Muda, I. (2022). Expenditure Cycle: Traditional Vs Digital Accounting Information Systems Era in Pharmaceutical Industry and Implementation of Internal Control Procedures That Enable Cost Savings in Dealing with Threats in The Cycle. Journal Of Pharmaceutical Negative Results, 3549-3557
- Shen, X., Li, X., Zhou, B., Jiang, Y., & Bao, J. (2023). Dynamic knowledge modeling and fusion method for custom apparel production process based on knowledge graph. Advanced Engineering Informatics, 55, 101880.
- Tumsekcali, E., Ayyildiz, E., & Taskin, A. (2021). Interval valued intuitionistic fuzzy AHP-WASPAS based public transportation service quality evaluation by a new extension of SERVQUAL Model: P-SERVQUAL 4.0. *Expert Systems with Applications*, *186*, 115757.