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Agility Toward the HRIS Advancement at the Organization and Its Impact on Performance in SMEs

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The purpose of this study is to find the relationship between Human Resource Information System (HRIS) implementation and its impact on organizational performance in Small Medium Enterprises (SME). The focus is on collecting information based on employee perceptions of change management after the implementation of HRIS, especially in SMEs. This study sought to explore the relationship between HRIS implementation and employee acceptance of the change that happened after HRIS implementation by utilizing quantitative methodology grounded in the Technology-Organization-Environment (TOE) framework. Hypotheses are tested by means of an empirical study conducted with the data collected from 400 employees in an IT company under the SME category. The results from this study indicated that, in SME sector, the performance of an organization will improve after the implementation of HRIS once the employees accept the change management. The results show the crucial role of change management in SME sector where resource availability and adaptability play a bigger role. The results can help top-level managers to channel their efforts to the factors which affects the employee's acceptance, which will improve the likelihood of participation of the employees. This employee participation will result in the successful achievement of the technology implementation.

1. Introduction

Human Resource is considered as an organization's asset and efficient human capital management is the foundation source of competitive advantage (N. A. Kumar & Parumasur, 2013). In the last decade, the significance of information technology (IT) in industry and commerce has improved dramatically. Information technology plays a crucial role in enhancing management practices, ensuring efficient and reliable service delivery in the e-commerce industry and SME industry (Mehmood, 2021; Rasool et al., 2023). Automation and IT-enabled process redesign have cut costs and cycle times while boosting output quality. Information technology is essential for optimizing business processes, enhancing efficiency, reducing costs, and improving decision-making in modern enterprises (Wahid et al., 2024). This change has caused an optimistic momentum in the field of human resource management and control.

Sometimes an employee's reaction to change varies in ways. Some vehemently resist change and continue the same for a long time, even for years. They hesitate to accept the change after it is implemented. Hesitation to change arises when employees lack adaptive attributes such as proactivity, resilience, and learning agility, making it difficult for them to navigate dynamic work environments (Park & Park, 2021). Often, this unwillingness is manifested by reduced production, employees' disengagement in work, conflicts, and sometimes it even affects the turnover of the company (Bridges, 1991). Employees' unwillingness to change often stems from fear of job loss, negative perceptions, resistance to uncertainty, and a preference for maintaining the status quo (Khaw et al., 2023). Conversely, some of the employees seem to make extra efforts to achieve change goals, and they start recommending the usefulness of the change that happened and how well it can be executed in the organization (Herscovitch & Meyer, 2002). Employees' attitude toward change is positively influenced by

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transformational leadership, fostering commitment, openness, and readiness while reducing resistance and cynicism (Peng et al., 2021). To identify such differences, the stage model is considered to know the experience of the employees before and after the implementation of new technology (Bridges, 2003).

Small and Medium-sized Enterprises (SMEs) are often confronted with resource limitations due to their small size. Making a strategic decision in SMEs is a complicated process. Balancing innovation and structured management in SMEs is challenging due to their limited management practices and dynamic adaptability (Andrade et al., 2023). If they plan to adopt the new technologies, they need to endorse the risk mitigating techniques (Köhler & Som, 2014). The implementation cost of new technologies in SME's is immensely expensive (Daim et al., 2006; Hogaboam & Daim, 2018; Rammel & van den Bergh, 2003). Acceptance must be primarily based on a well-analyzed strategic choice that takes into account the entire organizational benefits (Köhler & Som, 2014). Positive past experiences with change foster acceptance through strong job embeddedness and individual attachment (Vardaman et al., 2024).

The power of information technologies and internet communication have propelled the HR field and brought changes in the strategic management of human resources in a dynamic manner. Advanced MIS optimizes HR planning, enhancing efficiency and adaptability in dynamic business environments (Rusilowati et al., 2024). Only limited studies till now have studied in detail which HRIS supports to encourage a sense of preparedness for any change in employees. Change Management may be the mediating factor that aids in exploring the positive or negative relationship between HRIS implementation and organizational performance. This study aimed to analyze to what extent the introduction of change management as a mediator influences the effect of the HRIS system on organizational performance in SMEs.

2. Literature Review

Organizations across the world have recognized the importance of employees in establishing organizational structure and achieving corporate goals and have started investing in technology, like Human Resource Information Systems (HRIS), to recruit, assist, and manage their human resources. Several definitions of HRIS are available in the literature. (Kavanagh & Johnson, 2017) have defined HRIS as a software solution for collecting, storing, modifying, analyzing, retrieving, and allocating resources. Grobler (2005) described HRIS as 'The important transaction processor, editor, information-keeper, and purposeful utility system that sits on the centre of all computerized Human Resources (HR) activity.' Menant et al. (2021) defines HRIS as a facilitating computerized system which supports information management and administrative and strategic tasks as well as decision-making by human resource departments.

HRIS now no longer only consists of system hardware and HR-associated software, it additionally encompasses people, systems, processes, regulations, procedures, forms, and records. HRIS helps to store sufficient personnel, or-

ganizational, and HR plan records to fulfil maximum HR functions. In the modern times, technology has evolved tremendously, so there is a need to replace the paper work on collecting employees and organizational data. In tandem with technological advancements, the HR profession has evolved over time to play a more strategic role in businesses. Almost all HR operations are now computerized, thanks to the capabilities of information technology and the internet (Kavanagh & Johnson, 2017).

Human capital is a highly valued resource that provides the greatest source of sustainable competitive advantage (Song & An, 2013). Despite this, there has been a misalignment between how HR practitioners spend their effort and time and what would possibly make a distinction to the organization's profitability. Traditionally, HR professionals have focused their time and effort primarily on administrative tasks, followed by operational and then strategic activities. However, reversing this order by prioritizing strategic functions can significantly enhance the value of HR within the organization.

HRIS can give a lot of support to simplify HR functions and helps to add value to the organization by ensuring that less time is required to be spent on administrative tasks, which mainly saves time for strategic tasks. Additionally, the need for HRIS is critical because the strategic planning process increases the role of human resources in developing business. This information is important for management to create organizational goals and set and achieve strategic goals. (Chauhan et al., 2011). HRIS enhances workforce planning, talent management, and strategic decision-making across all management levels (Bal et al., 2013). HRIS significantly enhances organizational performance by improving data access, efficiency, and workforce management (J. Magege & Ngirwa, 2023).

Companies started depending more on the function of HR to deliver solutions related to management that enhanced the efficacy of human resources (Hendrickson, 2003). HRIS has grown into a more complicated tool that oversees a wide range of data on a company's human capital while also providing analytical capabilities to aid in the decision making about how assets are managed. Long-term strategic planning and company goals are achieved with the assistance of well-designed HRIS that help to collate and integrate human resource department outcomes (Carrell, 1998).

Lengnick-Hall & Moritz (2003) state that HRIS outcomes are stated as information efficiencies, time and cost savings, allowing HR departments to focus on performing better, more reliable analysis of current information to make strategic business decisions. Similarly, Shiri (2012) discovered that HRIS allows HR professionals to enhance their involvement in the firm's strategic decisions. While HRIS is an essential tool for HRM since it can give improved information for decision-making. N. A. Kumar & Parumasur (2013) notes that its efficacy is dependent on the problems of deployment and proper integration inside the company.

Successful HRIS implementation enhances job satisfaction and streamlines management, fostering a more engaged workforce (Maamari & Osta, 2021). HRIS serves as

a strategic tool for decision-making, enhancing efficiency and business sustainability (Moussa et al., 2025). HRIS and AI integration enhance SME productivity, decision-making, and competitiveness through digital transformation (Mohlala et al., 2024). Optimizing HRIS enhances MSME efficiency, workforce productivity, and overall organizational performance (Wakabi & Matovu, 2024).

2.1. Change Management and HRM

Change management is an important issue that HR professionals need to understand. The business world is ever-changing, and companies must learn to take advantage of those changes to successfully navigate these constraints (Lauzier et al., 2020; Yilmaz et al., 2013). This applies in particular to HR professionals, who are typically at the forefront of making changes within an organization. While HRIS were developed to increase productivity, they can increase productivity only when the employees are interested in learning how to use the system and become successful users (Wilson-Evered & Härtel, 2009).

The human factor is the most important predictor of the performance of Information System (IS) (Härtel et al., 2008). HR professionals must proactively drive change to harness the potential of any new change, despite current gaps in readiness and policy support (Nankervis et al., 2021). HR must adapt to paradigm-shifting disruptions from flexible workforces, digitalization, and AI to equip practitioners for future challenges (Minbaeva, 2021).

Employee's acceptance after the change is vital for the achievement of any implementation process (Al-Haddad & Kotnour, 2015). Once employees have a tendency to participate more after the change is implemented, then they have a tendency to simply accept it better (Sánchez-Medina, 2020). Employers and managers can enjoy the acceptance and its effect on organizational performance. Mitigating cognitive biases in decision-making is essential for enhancing objectivity in HR practices and successful change management (Palmucci, 2024). Integrating HR, change management, and knowledge management enhances employee engagement and improves talent retention in knowledge-intensive industries (Kossyva et al., 2023). By knowing, what have an impact on employee acceptance, managers can examine those elements earlier than beginning the process of implementation of a deliberate change. If consequences are favourable, then they are able to implement with assurance for enhancing organizational performance, if not, then they have to perform an intervention in elements looking to modify them an adequate level (Meyer & Herscovitch, 2001). Users of HRIS, including the HR department, may be oblivious of the functionalities, or change management processes may be too difficult to oversee (Krishnan & Singh, 2007). Effective change management is crucial for successful HRIS implementation, ensuring employee alignment with organizational vision (Dida et al., 2021).

2.2. Challenges in implementation of new technologies in SME's

When it involves new technology implementation, SME's should cope with numerous challenging situations. These challenging situations consider internal and external factors. As stated, limited technical facilities, limited financial, human and time resources, and lack of proper infrastructure are considered as internal factors (Madrid-Guijarro et al., 2009; Spielkamp & Rammer, 2006). However, as external factors, reduced funding access, lack of relationships and networks, not so proper regulations and support by the government (Hotho & Champion, 2011; Madrid-Guijarro et al., 2009; Rammer et al., 2009). Companies, on the other hand, benefit from employees who are motivated (Salavou et al., 2004).

Small and Medium Enterprises (SMEs) in emerging economies face significant challenges in adopting Industry 4.0 technologies, despite recognizing the potential for operational efficiency and market advantages. Financial and technological risks remain the most critical barriers, preventing seamless adoption of digital innovations (Tamvada et al., 2022). High initial costs and inadequate infrastructure pose formidable challenges, even though these technologies promise long-term cost savings. Moreover, operational and business risks, such as lack of interoperability and limited compliance with industry standards, further hinder the smooth integration of digital systems in SMEs (Elhusseiny & Crispim, 2022).

A lack of technical expertise among employees, managers, and business owners creates additional hurdles, limiting the ability of SMEs to effectively leverage new technologies (Shaikh et al., 2021). Insufficient frameworks to manage societal and cybersecurity risks also complicate the digital transformation journey, making it difficult for SMEs to safeguard their operations while embracing technological change (Fanelli, 2021). Furthermore, SMEs often struggle with aligning technology with their business needs, particularly during crises such as the COVID-19 pandemic (M. A. Kumar & Ayedee, 2020).

Financial constraints exacerbate these challenges, as many SMEs operate with limited budgets and receive inadequate support from governments. The high perceived cost of adopting digital technologies, coupled with a lack of top management support and insufficient government assistance, slows down the pace of technology adoption (Shahadat et al., 2023). Complexity and compatibility issues make it difficult for SMEs to integrate new ICT solutions, resulting in further delays in digital transformation. Limited organizational readiness and inadequate trialability prevent SMEs from fully exploring and benefiting from digital innovations (Hendrawan et al., 2024).

Regulatory complexity adds another layer of difficulty, especially when it comes to financial compliance, where the high cost of automated solutions makes it challenging for SMEs to meet regulatory standards effectively (Bello et al., 2024). In countries like South Africa, SMEs struggle with implementing digital systems due to a lack of integration, limited technical expertise, and high development

costs (Telukdarie et al., 2023). Similarly, SMEs across developing nations face significant organizational and technical barriers in adopting Industry 4.0 technologies, despite recognizing the potential benefits (Oldemeyer et al., 2024).

The adoption of artificial intelligence (AI) by SMEs is further hindered by a lack of knowledge, high costs, and inadequate infrastructure, emphasizing the need for tailored support and guidance to facilitate AI integration (Oldemeyer et al., 2024). Addressing these multifaceted challenges requires financial and technical support, along with favorable policies and targeted assistance to ensure the successful adoption of digital technologies in SMEs, particularly in rural areas (Fanelli, 2021). Without these crucial interventions, SMEs in emerging economies will continue to lag behind in their digital transformation journey, missing out on the competitive advantages that Industry 4.0 technologies can offer.

2.3. HRIS Implementation

It is important for the organization to create a supportive environment and provide sufficient resources for the implementation of new technologies (Premkumar & Roberts, 1999). Management will identify the business opportunities through the use of IT from a broader perspective, and their active support and involvement will provide the best strategic vision and direction for the implementation of new technologies (Drnevich & Croson, 2013). Management support will also describe the urge of innovation and so thereby they overcome organization's resistance to the introduction of the information system and they get success in it (Lapointe & Rivard, 2005). This leads to an active acceptance of new technologies by the users, which makes the transformation of existing work processes smoother (Yap, 1989). The intricacy of the HRIS system and its effect on employees and managers for the acceptance and managers with strategic responsibilities is a challenge for the organization during the implementation (Dery et al., 2009). HRIS implementation in Indonesian public sectors faces challenges due to coercive pressure, requiring HRM reforms to effectively enhance employee innovation outcomes (Satispi et al., 2023). Implementation of tools like HRIS is influenced by the active role of vendors and consultants, who exert various pressures on customer organizations throughout the adoption process (Jemine & Guillaume, 2021). This may result in low involvement from lower management because of fear of accepting new things, or it may be due to a corporate lifestyle that does not allow the implementation of any type of change (Cresswell & Sheikh, 2013). This study has shown that there are some financial and social hurdles to implementing HRIS, especially in SMEs. Krishnan & Singh (2007) mentioned that there is knowledge paucity about HRIS applications and the absence of importance of the HR department (Altarawneh & Al-Shqairat, 2010). This may be for cultural reasons or any other reason and may also be the crucial hurdles for implementing HRIS in the organizations.

The intensity of Human Resources Information Systems (HRIS) usage, particularly the number of available functionalities, significantly enhances organizational perfor-

mance, although this impact may also reflect the overall maturity of organizational management (Barišić et al., 2019). HRIS adoption and usage significantly influence organizational performance, with system quality being a key predictor, highlighting the need for improved implementation, especially in SMEs (Noutsu et al., 2017). Abuhantash (2023) mentions that HRIS implementation enhances organizational performance by improving efficiency, effectiveness, and competitive advantage through centralized and automated HR management. With the above insights, we hypothesize the following.

H1: HRIS implementation significantly impacts the Organizational Performance in SME IT companies.

2.4. Predictors for change Management

HRIS is a software that manages a company's employee database. It helps in the tracking of various personnel data and analysis of the data such as performance, payroll, leave management, and other fundamental employee, former employee, and candidate qualities (Kähkönen, 2020; Kavanagh & Johnson, 2017). HRIS has been designed to meet the needs of both businesses and individuals (Bal et al., 2013). HR operations become more transparent with the adoption of HRIS (Sadiq et al., 2013). Many private industrial and service sector companies have installed HRIS to allow for quick access to information and decision-making (Quaasar & Rahman, 2021). This tool produces quick results and promotes successful organizational growth. HR departments, employees, and supervisors all use HRIS systems (Sharma et al., 2023). While HRIS is intended to enhance productivity, it can only do so if employees are willing to learn how to utilize the technology and become successful users (Wilson-Evered & Härtel, 2009). Change management is believed to play a vital role in the successful implementation of HRIS (Diefenbach, 2007; Kavanagh & Johnson, 2017).

Ngai & Wat (2006) state that HRIS functionality now includes proper communication among corporates, end-to-end recruitment process, selection process, negotiation, training, compensation fixation, payroll management and employee verification and also maintaining all general and common information. Holincheck et al. (2007) differentiate between back office, skill management, personnel management, workforce analytics and delivery of service, and Decision Support System (DSS) applications. Completed a transformation to technology-intensive HRM from employee-intensive HRM, a change that is all but simple. Kovach et al. (2002) explain that making people accept a newly introduced system, which is really a new process for them, is the biggest challenge in implementing an HRIS even after they decide that HRIS is the only way to attain both strategic and administrative plans and merits.

Beckard & Harris (1987) assume that preparedness for change should be related to the organization's capabilities and provide a system to inspect the bond between the organization's current capabilities and the level of preparedness for change. It is identified that an organizational capability check helps the organization place importance on

important areas that need improvement and aims to create a critical need for change (Maier et al., 2012). There is a concern about operational capabilities and modernization capabilities. Operation capabilities are essential to maintain daily performance (Cepeda & Vera, 2007). Successfully implementing a new system differs from what is needed for the performance of the current business. Effective implementation of a new system in an organization requires leaders to shape employees' agency, mitigate uncertainty, and guide them through the change process to ensure successful adoption (Potosky & Azan, 2023). Implementing a new system in an organization requires assessing readiness across key dimensions to develop strategies that ensure a smooth and effective transformation (Shukla & Shankar, 2024). For identifying modernization options, a method is proposed that encompasses organizational performance and development (Bălan, 2009). Development involves the development of all the resources and systems that the organization will need in the future (Ackerman, 2023). It is an opportunity to dynamically manage the things that help the organization perform better and to ensure continuous improvement as well as effective change (Gutierrez-Gutierrez & Antony, 2019). Successful implementation of change management will be the result of the developing performance of the Organization (By, 2005). Organizations that can provide employees with opportunities to learn and grow have a significant impact on employee perceptions of organizational support because growth opportunities signal that the organization cares about their well-being (Narang & Singh, 2011).

Employees should be motivated, encouraged, and rewarded for their efforts, and their skills should be developed, nurtured, and utilized to improve organizational performance (Salman et al., 2020). Evidence-based change management enhances organizational performance by leveraging science-informed practices and multiple sources of evidence to guide the change process effectively (Rousseau & ten Have, 2022). Transformational leadership and a supportive organizational culture positively influence change management, enhancing performance in virtual teams (Kaur Bagga et al., 2023). This study aimed to analyze to what extent the introduction of change management influences the effect of the HRIS system on organizational performance in SMEs.

H2: Change management significantly impacts the Organizational Performance in SME IT companies.

H3: Change management mediates the relationship between HRIS implementation and Organizational Performance in IT companies.

The success of the HRIS relies on the support of employees. An important issue in the implementation of HRIS is the refusal to accept the change by the users (Kavanagh et al., 1990).

With the hypotheses mentioned above, we propose the research model which explains the impact of Change Management on the effect of HRIS implementation on Organizational Performance in IT SME organizations as shown in [figure 1](#).

3. TOE Framework

The Technology-Organisation-Environment is the framework described by Tornatzky et al. (1990) in their work 'The Process of Technology Innovation'. Adoption of technology is influenced by a combination of factors both inside and outside a firm. These include the technologies available, how useful they are perceived to be, and their compatibility with the firm's existing systems (Awa et al., 2015).

On the organizational side, factors like the firm's business scope, support from top management, organizational culture, and the complexity are crucial. The quality of human capital and the firm's size, as well as issues related to its resources and specialization, also matter (Sabherwal et al., 2006). The external environment has its own set of influences, including operational facilitators and inhibitors. Key factors here include competitive pressure, the readiness of trading partners, socio-cultural aspects, government support, and technology infrastructure such as access to skilled ICT consultants (Jeyaraj et al., 2006; Qirim, 2006). This framework defines how the company's context influences the acceptance and execution of new technology innovations.

T-O-E framework is that some of the adoption predictors it uses are more applicable to large organizations, where there's typically greater stability and fewer complaints, than to small and medium-sized enterprises (SMEs) (Awa et al., 2011). However, scholars such as Eze et al. (2013) have successfully applied the T-O-E framework in their studies, finding that the innovation's characteristics, the organization's technology, and the external environment are useful in explaining and predicting the rate of adoption. The framework is given in [figure 2](#).

Zhu & Kraemer (2005) highlighted several critical adoption factors within the T-O-E framework, including technology competence, firm size, financial commitment, competitive pressure, and regulatory support. (Kuan & Chau, 2001) validated the framework's applicability in small enterprises by proposing a perception-based technology adoption model that incorporates six key determinants: cost structure, technical competence, industry pressure, government pressure, direct perceived usefulness, and indirect perceived usefulness.

We developed our model based on the TOE framework, which consists of three key elements that influence the adoption decision: technological context, organizational context, and environmental context. These three factors play a significant role in shaping technological innovation. Following the implementation of HRIS, we focus on employees' acceptance of the new technology and how change management practices post-implementation impact the organization's performance.

4. Data Collection and Data Analysis

Survey method is used to test the proposed model empirically. The quantitative study employed empirical methods, utilizing deductive reasoning and a positivist approach. It relied on numerical data to test the proposed

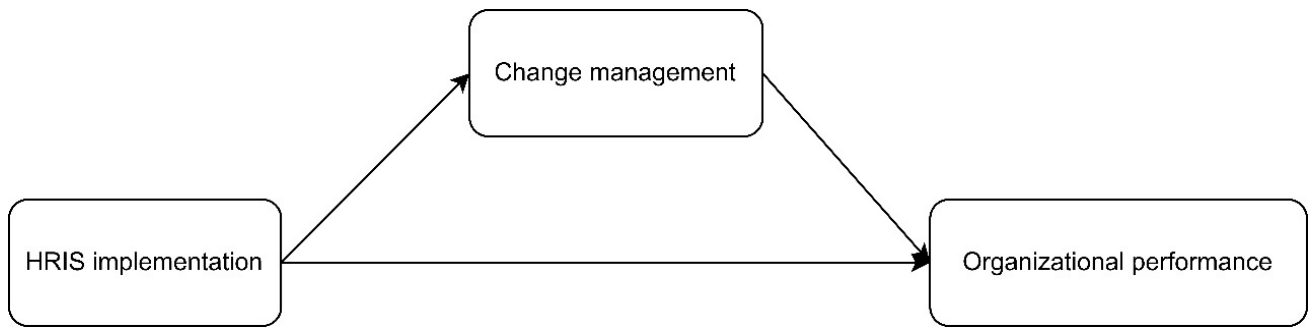


Figure 1. Research Model

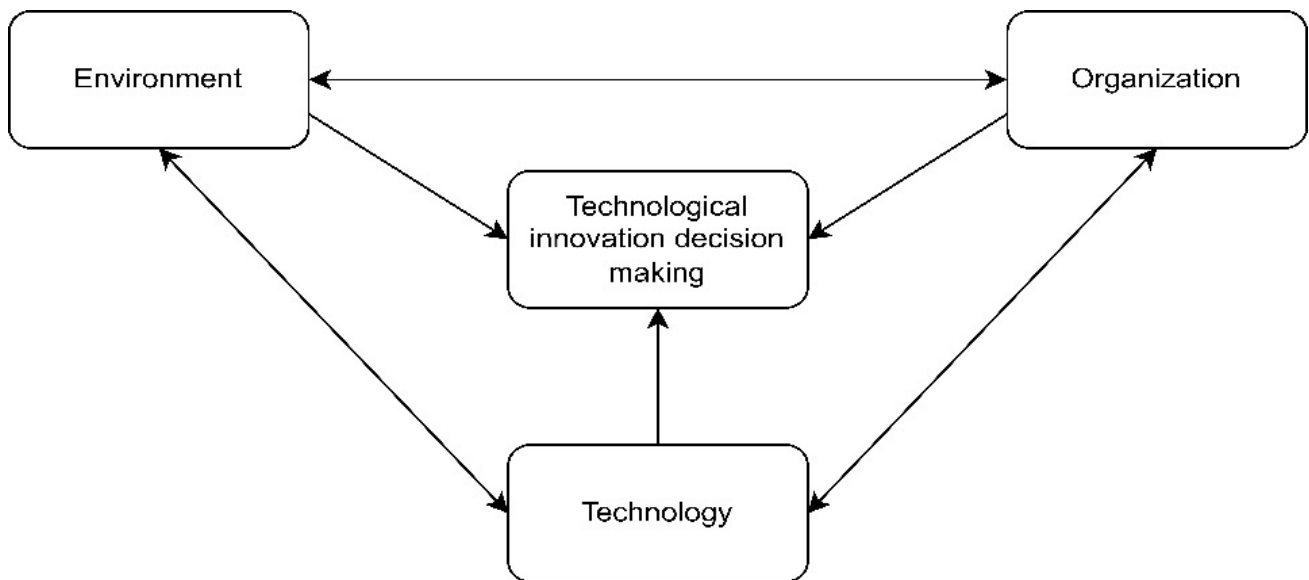


Figure 2. T-O-E Framework

model. The universe of this work is the employees of SMEs located in the Chennai region, Tamilnadu, India. The sample size of this study was 400, and the samples were selected based on a mix of purposive and snowball sampling procedures. The data collection was initiated with a population of a small number of individuals who are already known to researchers, and the sample size was increased by enquiring about those respondents who answered initially to identify others that should participate in the study (Ritchie et al., 2013). The data for the research was collected using a survey instrument developed by the authors. The variables identified from the review of literature were operationalized using a survey research instrument. Items were derived from prior studies and modified to fit in the context of HRIS implementation and organizational performance with the mediating role of change management.

The survey instrument included items for all three constructs. It included 8 items in HRIS implementation (Maa-mari & Osta, 2021 (CA:0.86); Yusliza & Ramayah, 2012 (CA:0.935)), 10 items in change management (Holt et al., 2007 (CA:0.86)) and 3 items in organizational performance (Jyoti & Rani, 2017 (CA:0.887)).

A five-point likert scale was used to capture the responses for the variables studied. The range of scale varies

from one to five for statements in the questionnaire, with five denoting strongly agree and one denoting strongly disagree.

4.1. Demographic Profile

The respondents' demographic characteristics are shown in Table 1. With respect to the gender profile, the majority were male (57.0%) and female respondents accounted for only 43.0%. Among the respondents, most of them fall into the age group of 41–50 years (32.0%), followed by 51–60 years (28.0%), and 31–40 years (26.0%). Among the respondents, most of them were post-graduates (41.3%) and graduates (37.0%). Interestingly, 10.3% of the respondents have a doctorate degree and 11.5% of the respondents have other professional qualifications. Respondents with designation as HR manager and HR staff constituted 32.0% each. 20.0% of the respondents were Manager (Other) and 16.0% were Assistant HR Managers. The experience level of the respondents was significant. Among the respondents, 26.0% of them have experience of between 11 and 15 years, and 22.0% have experience of around 16 to 20 years.

Table 1. Demographic Profile (N=400)

Variable	Category	Frequency	Percent
Gender	Male	228	57.0
	Female	172	43.0
Age (Years)	21-30	56	14.0
	31-40	104	26.0
	41- 50	128	32.0
	51-60	112	28.0
Qualification	Graduate	148	37.0
	Post Graduate	165	41.3
	Doctorate	41	10.3
	Others	46	11.5
Designation	Asst. HR Manager	64	16.0
	HR manager	128	32.0
	HR staff	128	32.0
	Manager (Other)	80	20.0
Experience	Less than 5 years	48	12.0
	6 to 10 years	88	22.0
	11 to 15 years	104	26.0
	16 to 20 years	88	22.0

Table 2. Descriptive Analysis (N=400)

Variables	No. of Items	Mean	Std. Deviation	Skewness	Kurtosis
HRIS implementation	8	3.38	0.62	0.543	1.43
Change Management	10	3.47	0.56	0.643	0.92
Organizational Performance	3	3.76	0.63	0.449	0.08

4.2. Descriptive Statistics

The descriptive statistics of the three variables are presented in [Table 2](#). The values of kurtosis and skewness are within the range of ± 2 , indicating that the constructs meet the requirement for the normality test and can be subjected to different parametric tests.

4.3. Common method bias

A total of 400 valid responses were collected, meeting the required sample size of 10 responses per item (Hair et al., 2010). To assess common method bias, Harman's one-factor test using Exploratory Factor Analysis (EFA) was performed (Podsakoff & Organ, 1986). This test checks whether a single factor is responsible for explaining the majority of the variance. The results showed that a single factor accounted for 44% of the variance, which is below the 50% threshold (Podsakoff et al., 2003), indicating that common method bias is not a significant concern for this study.

After confirming no significant bias, the study proceeded with assessing the model fit and testing the hypotheses. For hypothesis testing, the study chose the PROCESS macro over other covariance-based SEM programs (e.g., AMOS) for

several reasons: it is simple, effective, and user-friendly for conducting mediational and conditional analysis with observed variables (Hayes et al., 2017). Unlike SEM programs such as AMOS, the PROCESS macro offers precise statistical inferences, including specific conditional indirect effects and moderated mediation indices, with minimal coding effort required from the user (Hayes et al., 2017). It also addresses issues that arise with interaction estimates in the latent variable approach (Hayes et al., 2017) and avoids sample size and degree of freedom restrictions typically found in covariance-based SEM (Hair et al., 2010).

4.4. Measurement Model

Confirmatory Factor Analysis (CFA) was conducted to assess construct validity. Since the χ^2 test is highly sensitive to sample size, it is not ideal for testing model fit with large sample sizes (Ullman, 2006). As shown in [Table 8](#), the fit indices indicate that the model fits the data well.

Next, convergent and discriminant validity were assessed to validate the measurement model. As presented in [Table 3](#), all α -coefficients were above 0.7, meeting the recommended threshold (Cronbach, 1951). For convergent validity, the following criteria were checked: (1) Composite

Table 3. Measurement model (CA – Cronbach alpha, CR – Composite Reliability, AVE – Average Variance Extracted, MSV – Maximum Shared Variance)

Items	Factor loading	CA	CR	AVE	MSV
HRIS implementation		0.84	0.759	0.575	0.051
HI1	0.967				
HI2	0.807				
HI3	0.928				
HI4	0.917				
HI5	0.878				
HI6	0.941				
HI7	0.864				
HI8	0.825				
Change management		0.753	0.724	0.545	0.501
CM1	0.775				
CM2	0.919				
CM3	0.784				
CM4	0.974				
CM5	0.773				
CM6	0.812				
CM7	0.792				
CM8	0.86				
CM9	0.837				
CM10	0.732				
Organizational performance		0.902	0.793	0.517	0.410
OP1	0.948				
OP2	0.842				
OP3	0.804				

Reliability (CR) ≥ 0.7 , (2) Average Variance Extracted (AVE) ≥ 0.5 , (3) factor loadings > 0.7 and statistically significant, and (4) CR $>$ AVE (Fornell & Larcker, 1981). The results in [Table 3](#) show that all these criteria were met, with CR values ranging from 0.790 to 0.970, confirming internal consistency (Fornell & Larcker, 1981). AVE values ranged from 0.550 to 0.850, all factor loadings were above 0.7, and CR values exceeded the corresponding AVE values. Items for each construct is given in [table 4](#). Correlation among the constructs is given in [table 5](#).

4.5. Model-Mediation Analysis

Analysis on the mediation variable was conducted to study the effect of mediation in Change Management on the relationship between HRIS implementation and Organizational Performance. Firstly, the direct effect was measured with HRIS implementation as the independent variable and Organizational Performance as the dependent variable ([Figure 2](#)).

The outcome of the direct test model tells us that model is significant ($P < 0.05$) with a path coefficient value as 0.29 ([Table 6](#)).

4.6. Indirect Effect of Change Management on HRIS implementation Vs Organizational Performance

The indirect effect was calculated by including the mediating variable (Change Management). From [Table 7](#), the mediating variable (Change Management) has a significant effect of the predictor variable (HRIS implementation) on the dependent variable (Organizational Performance). However, the path coefficient of HRIS implementation has been reduced from 0.29 to 0.26. The mediation analysis results tell us that 'partial mediation' is revealed because of the effect of mediation of the variable (Change Management) on the relationship between HRIS implementation and Organizational Performance ([Figure 3](#)).

5. Findings

5.1. Goodness of Fit Evaluation

Goodness of Fit is used to assess the overall model fit in proposed models (Tenenhaus et al., 2004). We have used PROCESS macro to get the Goodness of Fit metrics for the model developed. The results are given in [table 8](#). The

Table 4. Constructs and items

Constructs and items	Item code
HRIS implementation	
Overall, I would find the new HRIS useful in my job	HI1
Using the new HRIS enables me to accomplish tasks more quickly	HI2
Using the new HRIS increases my productivity	HI3
If I use the new HRIS, I will increase my chances of getting a raise	HI4
My interaction with the new HRIS would be clear and understandable	HI5
It would be easy for me to become skillful at using new HRIS	HI6
Overall, I would find the new HRIS easy to use	HI7
Learning to operate the new HRIS is easy for me	HI8
Change management	
I think that the organization will benefit from this change.	CM1
It doesn't make much sense for us to initiate this change.	CM2
There are legitimate reasons for us to make this change.	CM3
This change will improve our organization's overall efficiency.	CM4
There are a number of rational reasons for this change to be made.	CM5
In the long run, I feel it will be worthwhile for me if the organization adopts this change	CM6
This change makes my job easier.	CM7
When this change is implemented, I don't believe there is anything for me to gain.	CM8
The time we are spending on this change should be spent on something else	CM9
This change matches the priorities of our organization	CM10
Organizational performance	
Service quality has improved as compared to last year	OP1
Number of customer complaints has reduced as compared to last year	OP2
Customer satisfaction has increased as compared to last year	OP3

Table 5. Correlation of constructs

	HRIS implementation	Change Management	Organizational performance
HRIS implementation	0.756		
Change Management	0.234	0.738	
Organizational performance	0.198	0.064	0.719

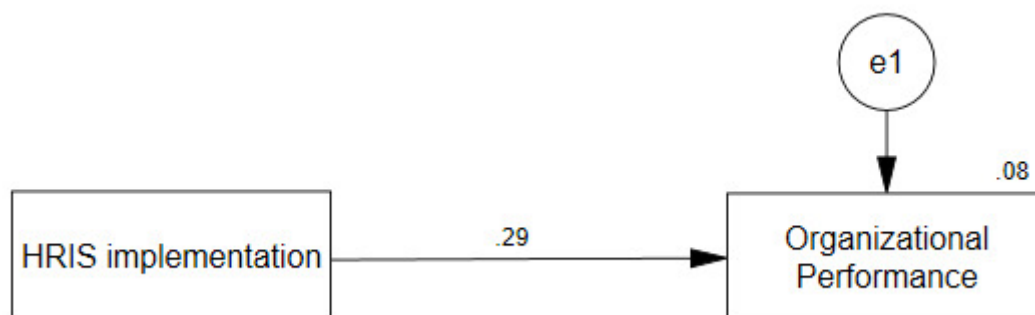
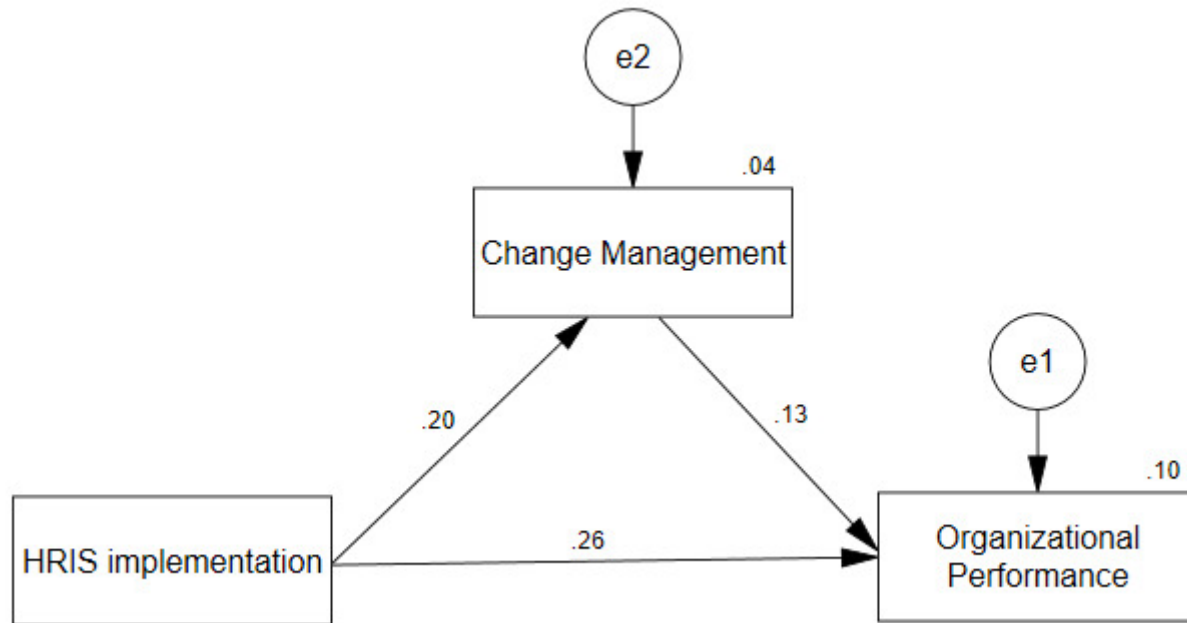
**Figure 3. Direct Effect of HRIS implementation on Organizational Performance**

Table 6. Direct Effect of HRIS implementation on Organizational Performance

			Beta Estimate	S.E.	C.R.	p - value	Result
Organizational Performance	<---	HRIS implementation	0.29	0.04	5.92	0.001	Significant

**Figure 4. Indirect Effect of Change Management on HRIS implementation Vs Organizational Performance****Table 7. Indirect Effect of Change Management on HRIS implementation Vs Organizational Performance**

	Beta Estimate	S.E.	C.R.	p - value	Result
HRIS Implementation HRIS implementationOrganizational performance	0.20	.045	4.17	0.001	Significant
Change management Organizational performance	0.13	.054	2.69	0.007	H2 -Significant
HRIS implementation Change managementOrganizational performance	0.26	.049	5.36	0.001	H3-Significant

recommended values justify the values of measurements. Therefore, the model is a good fit model.

5.1.1. Goodness of Fit indices. Comparative fit index (CFI) should be greater than 0.9 (Hair et al., 2010), our analysis gives 0.976. For Normed fit index (NFI), we got 0.646 which is higher than the reference value 0.9 (Hair et al., 2010; Hu & Bentler, 1999). Root mean square error of approximation (RMSEA) should be less than 0.08 (Browne & Cudeck, 1992; Hair et al., 2010), we got 0.066. Threshold for Root mean square residual (RMR) is 0.05 (Hair et al., 2010), we have obtained the value as 0.04. Tucker–Lewis index (TLI) should be greater than 0.9 (Hair et al., 2010), and our value is 0.846 (McDonald & Ho, 2002). The details of the indices are given in [Table 5](#). As all the obtained values

are within the limits of values given in previous literature, we can say that the model is a good fit.

5.2. Findings on hypotheses

From the outcome of the SEM analysis, it is derived that the hypothesis H1 ‘HRIS implementation significantly impacts the Organizational Performance in IT companies’ is accepted as the p-value is significant ($B = 0.26$, $p = 0.00$). Similarly, the hypothesis H2 ‘Change management significantly impacts the Organizational Performance in IT companies’ is accepted as the p-value is significant ($B = 0.13$, $p = 0.007$). Finally, the output of the mediation analysis shows that the hypothesis H3 ‘Change management mediates the relationship between HRIS implementation and

Table 8. Goodness of Fit

Variable	Obtained Value
P value	.092
RMSEA	.066
RMR	.008
GFI	.994
AGFI	.964
CFI	.976
TLI	.846
RFI	.748
NFI	.946
Chisq/df	345.513/186

Organizational Performance in IT companies' is accepted as the p-value is significant ($B=0.26$, $p=0.001$).

6. Discussions and Managerial Implications

Small and Medium Enterprises (SMEs) have the opportunity to leverage HRIS (Human Resource Information Systems) to drive success. It is clear that individuals with higher levels of education are more adept at using HRIS and playing an active role in the development of SMEs. The influence on Organizational Performance by HRIS illustrates the importance of ensuring effective HRIS implementation. HRIS on profitable management can be improved by providing training on how to use the system and finding trained users in each section to train employees to use the system effectively. Documents must be available in one entity and across all HR functions to find the total return on investment in the HRIS. This mirrors the argument of N. A. Kumar & Parumasur (2013) that "managerial satisfaction with an HRIS may also be affected by the distance and isolation that it can create between HR and employees." It may also be that gauging the effective use of HRIS and its ensuing paybacks is daunting (Udekwe & de la Harpe, 2017). HRISs are intricate systems and this intricacy is one of the reasons such systems are not eagerly embraced (Maruru, 2014).

Though it is SME IT companies, cost effectiveness is mainly considered as the pull factor to achieve greater performance. Time management is considered the main factor for introducing the new innovative technology. The HRIS system must be easy to use and navigate and support all business related processes, decision-making, and timely achievement of corporate goals. Indeed, a well-implemented and effective HRIS can drive support for business strategy, strategic alignment, and increase organizational performance.

IT adoption in SMEs has been the focus of few researches, information technology implementation (such as HRIS) in this category of enterprises begs for further investigation in the developing world with limited studies done on the effects of HRIS usage (Noutsu Fobang et al., 2019). Employee acceptance of new innovative technology is critical for change management success. When the process of

change involves more employees, they will be more engaged. Senior and junior management, as well as employees, can benefit from their knowledge of the new system and track record of organizational performance. By understanding what drives the acceptance, managers can test these things before beginning the planned change management process of implementation. If the outcomes are favourable, they can proceed with more confidence to implement the HRIS; if not, they can choose other options.

7. Limitations and Future Research

The main limitations are associated with the failure and success of change initiatives as per the plan. The success achieved after the implementation of the HRIS was not evaluated in this study. While it can be acknowledged that certain elements of success were achieved, this study did not systematically analyze the extent to which the HRIS was successful in enhancing organizational performance. This kind of analysis that would have enabled an examination of the relationship between the degree of success of quality initiatives and the study variables. This dimension should be seriously considered for future research. The study could even be extended to other organizations and add more variables related to change management and HRIS and the impact on business performance. In future research, concentrate more on success factors after the technology implementations and longitudinal studies should be conducted to get a better understanding of the growth of the organisation. In this study, majority of the respondents were from HR department. In future study, this pool could be more diverse including employees from across departments.

8. Conclusion

The positive effect of the HRIS on organizational performance highlight the importance to ensure that an efficient HRIS is implemented. It highlights several key factors that can support the implementation and use of HRIS in management, particularly the importance of system quality to ensure reliability, availability, and adaptability in dynamic environments during the technology selection process. On the other hand, employees must be fully trained for such a change in the system. For SMEs, the decision to implement a HRIS represents not merely a technological upgrade, but a strategic pivot in how human capital is managed and organizational goals are achieved. Management should spend a sufficient budget to implement HRIS for better performance and focus on training employees and actively participate in follow-up activities. Guidance and daily support should be provided. Unlike larger firms, SMEs often operate within tight financial margins, with constrained technical resources. These unique limitations necessitate a nuanced understanding of how HRIS adoption and change management interact to influence performance outcomes in such settings. This study highlights that employee acceptance of change serves as a vital link between HRIS implementation and improved organizational performance in SMEs. The partial mediation observed in this relationship rein-

forces the idea that technology alone is insufficient. The people behind the system and their willingness to engage with change are crucial. SMEs must therefore prioritize structured change management practices that foster trust, address employee concerns, and build technological confidence, particularly when introducing HRIS tools. Policy-makers, technology vendors, and SME leaders must collaborate to reduce adoption barriers through targeted support, affordable systems, and contextual training. When ap-

proached thoughtfully, HRIS adoption becomes a powerful catalyst for SME transformation, enabling them to harness digital tools to grow sustainably, adapt rapidly, and compete more effectively in evolving markets.

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References

- Abuhantash, A. (2023). The Impact of Human Resource Information Systems on Organizational Performance: A Systematic Literature Review. *European Journal of Business and Management Research*, 8(3), Article 3. <https://doi.org/10.24018/ejbmr.2023.8.3.1992>
- Ackerman, L. S. (2023, April 1). *Development, Transition, or Transformation: The Question of Change in Organizations*. EBSCOhost. <https://openurl.ebsco.com/contentitem/gcd:162606796?sid=ebsco:plink:crawler&id=ebsco:gcd:162606796>
- Al-Haddad, S., & Kotnour, T. (2015). Integrating the organizational change literature: A model for successful change. *Journal of Organizational Change Management*, 28(2), 234–262. <https://doi.org/10.1108/JOCM-11-2013-0215>
- Altarawneh, I., & Al-Shqairat, Z. (2010). Human resource information systems in Jordanian universities. *International Journal of Business and Management*, 5(10), 113. <https://doi.org/10.5539/ijbm.v5n10p113>
- Andrade, J., Franco, M., & Mendes, L. (2023). Facilitating and Inhibiting Effects of Organisational Ambidexterity in SME: An Analysis Centred on SME Characteristics. *Journal of the Knowledge Economy*, 14(1), 35–64. <https://doi.org/10.1007/s13132-021-00831-9>
- Awa, H. O., Baridam, D. M., & Nwibere, B. M. (2015). Demographic determinants of electronic commerce (EC) adoption by SMEs: A twist by location factors. *Journal of Enterprise Information Management*, 28(3), 326–345. <https://doi.org/10.1108/JEIM-10-2013-0073>
- Awa, H. O., Eze, S. C., Urieto, J. E., & Inyang, B. J. (2011). Upper echelon theory (UET) a major determinant of information technology (IT) adoption by SMEs in Nigeria. *Journal of Systems and Information Technology*, 13(2), 144–162. <https://doi.org/10.1108/13287261111135981>
- Bal, Y., Bozkurt, S., & Ertemsir, E. (2013). The Importance of Using Human Resources Information Systems (HRIS) and a Research on Determining The Success of HRIS. In *Strategic Human Resource Management at Tertiary Level*. River Publishers.
- Bălan, A. (2009). THE KNOWLEDGE MANAGEMENT – NECESSITY FOR THE MODERNIZATION OF THE ORGANIZATIONS. *Journal of Applied Economic Sciences (JAES)*, IV(10), 494–501.
- Barišić, A. F., Poór, J., & Pejić Bach, M. (2019). The Intensity of Human Resources Information Systems usage and Organizational Performance. *Interdisciplinary Description of Complex Systems: INDECS*, 17(3-B), 586–597. <https://doi.org/10.7906/indecs.17.3.14>
- Beckard, R., & Harris, R. (1987). *Organizational Transitions: Managing Complex Change* (2nd ed.). Addison-Wesley.
- Bello, H. O., Idemudia, C., & Iyelolu, T. V. (2024). Navigating Financial Compliance in Small and Medium-Sized Enterprises (SMEs): Overcoming challenges and implementing effective solutions. *World Journal of Advanced Research and Reviews*, 23(1), 042–055. <https://doi.org/10.30574/wjarr.2024.23.1.1984>
- Bridges, W. (1991). *Managing transitions: Making the most of change*. Addison-Wesley.
- Bridges, W. (2003). *Managing transitions: Making the most of change* (2nd ed.). Da Capo Press.
- Browne, M. W., & Cudeck, R. (1992). Alternative Ways of Assessing Model Fit. *Sociological Methods & Research*, 21(2), 230–258. <https://doi.org/10.1177/0049124192021002005>
- By, R. T. (2005). Organisational change management: A critical review. *Journal of Change Management*, 5(4), 369–380. <https://doi.org/10.1080/14697010500359250>
- Carrell, M. R. (1998). *Human resource management in South Africa*. Prentice hall South Africa.
- Cepeda, G., & Vera, D. (2007). Dynamic capabilities and operational capabilities: A knowledge management perspective. *Journal of Business Research*, 60(5), 426–437. <https://doi.org/10.1016/j.jbusres.2007.01.013>
- Chauhan, A., Sharma, S. K., & Tyagi, T. (2011). Role of HRIS in improving modern HR operations. *Review of Management*, 1(2), 58–70.
- Cresswell, K., & Sheikh, A. (2013). Organizational issues in the implementation and adoption of health information technology innovations: An interpretative review. *International Journal of Medical Informatics*, 82(5), e73–e86. <https://doi.org/10.1016/j.ijmedinf.2012.10.007>
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/BF02310555>
- Daim, T. U., Rueda, G., Martin, H., & Gerdri, P. (2006). Forecasting emerging technologies: Use of bibliometrics and patent analysis. *Technological Forecasting and Social Change*, 73(8), 981–1012. <https://doi.org/10.1016/j.techfore.2006.04.004>
- Dery, K., Grant, D., & Wiblen, S. (2009). Human resource information systems (HRIS): Replacing or enhancing HRM. *Proceedings of the 15th World Congress of the International Industrial Relations Association IIRA*, 24–27. <https://www.academia.edu/download/34060532/e0b4951b9857b720f4.pdf>
- Dida, H. H., Moguche, A., & Rintari, Dr. N. (2021). Relationship between Change Management and the Implementation of the Human Resource Information System in Isiolo County Government, Kenya. *Human Resource and Leadership Journal*, 6(1), 65–76. <https://doi.org/10.47941/hrlj.648>

- Diefenbach, T. (2007). The managerialistic ideology of organisational change management. *Journal of Organizational Change Management*, 20(1), 126–144. <https://doi.org/10.1108/09534810710715324>
- Drnevich, P. L., & Croson, D. C. (2013). Information Technology and Business-Level Strategy: Toward an Integrated Theoretical Perspective. *MIS Quarterly*, 37(2), 483–509. <https://doi.org/10.25300/MISQ/2013/37.2.08>
- Elhousseiny, H. M., & Crispim, J. (2022). SMEs, Barriers and Opportunities on adopting Industry 4.0: A Review. *Procedia Computer Science*, 196, 864–871. <https://doi.org/10.1016/j.procs.2021.12.086>
- Eze, S. C., Awa, H. O., Okoye, J. C., Emecheta, B. C., & Anazodo, R. O. (2013). Determinant factors of information communication technology (ICT) adoption by government-owned universities in Nigeria: A qualitative approach. *Journal of Enterprise Information Management*, 26(4), 427–443. <https://doi.org/10.1108/JEIM-05-2013-0024>
- Fanelli, R. M. (2021). Barriers to Adopting New Technologies within Rural Small and Medium Enterprises (SMEs). *Social Sciences*, 10(11), Article 11. <https://doi.org/10.3390/socsci10110430>
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382–388. <https://doi.org/10.1177/002224378101800313>
- Grobler, P. A. (2005). *Human resource management in South Africa*. Cengage Learning EMEA.
- Gutierrez-Gutierrez, L., & Antony, J. (2019). Continuous improvement initiatives for dynamic capabilities development: A systematic literature review. *International Journal of Lean Six Sigma*, 11(1), 125–149. <https://doi.org/10.1108/IJLSS-07-2018-0071>
- Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis. In *Multivariate data analysis* (pp. 785–785). <https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1074274>
- Härtel, C. E. J., Torres-Coronas, T., & Arias-Oliva, M. (2008). HR as manager of the human imprint. In *Encyclopedia of HRIS: Challenges in e-HRM* (pp. 457–463).
- Hayes, A. F., Montoya, A. K., & Rockwood, N. J. (2017). The Analysis of Mechanisms and Their Contingencies: PROCESS versus Structural Equation Modeling. *Australasian Marketing Journal*, 25(1), 76–81. <https://doi.org/10.1016/j.ausmj.2017.02.001>
- Hendrawan, S. A., Chatra, A., Iman, N., Hidayatullah, S., & Suprayitno, D. (2024). Digital Transformation in MSMEs: Challenges and Opportunities in Technology Management. *Jurnal Informasi Dan Teknologi*, 141–149. <https://doi.org/10.60083/jidt.v6i2.551>
- Hendrickson, A. R. (2003). Human resource information systems: Backbone technology of contemporary human resources. *Journal of Labor Research*, 24(3), 381. <https://doi.org/10.1007/s12122-003-1002-5>
- Herscovitch, L., & Meyer, J. P. (2002). Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*, 87(3), 474–487. <https://doi.org/10.1037/0021-9010.87.3.474>
- Hogaboam, L., & Daim, T. (2018). Technology adoption potential of medical devices: The case of wearable sensor products for pervasive care in neurosurgery and orthopedics. *Health Policy and Technology*, 7(4), 409–419. <https://doi.org/10.1016/j.hlpt.2018.10.011>
- Holmbeck, J., Brown, R., & Woods, J. (2007, August 28). *Hype cycle for human capital management software*. Gartner.
- Holt, D. T., Armenakis, A. A., Feild, H. S., & Harris, S. G. (2007). Readiness for Organizational Change: The Systematic Development of a Scale. *The Journal of Applied Behavioral Science*, 43(2), 232–255. <https://doi.org/10.1177/0021886306295295>
- Hotho, S., & Champion, K. (2011). Small businesses in the new creative industries: Innovation as a people management challenge. *Management Decision*, 49(1), 29–54. <https://doi.org/10.1108/00251741111094428>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- J. Magege, T., & Ngirwa, Dr. C. C. (2023). EFFECTIVENESS OF HUMAN RESOURCES INFORMATION SYSTEM (HRIS) ON ORGANISATIONAL PERFORMANCE IN THE BANKING SECTOR. *International Journal of Business Management and Economic Review*, 06(01), 39–51. <https://doi.org/10.35409/IJBMER.2023.3458>
- Jemine, G., & Guillaume, K. (2021). Lifting the veil on HRIS adoption: The role of vendors and consultants in the diffusion of HR innovations. *Information Technology & People*, 35(7), 2418–2440. <https://doi.org/10.1108/ITP-02-2021-0114>
- Jeyaraj, A., Rottman, J. W., & Lacity, M. C. (2006). A Review of the Predictors, Linkages, and Biases in IT Innovation Adoption Research. *Journal of Information Technology*, 21(1), 1–23. <https://doi.org/10.1057/palgrave.jit.2000056>
- Jyoti, J., & Rani, A. (2017). High performance work system and organisational performance: Role of knowledge management. *Personnel Review*, 46(8), 1770–1795. <https://doi.org/10.1108/PR-10-2015-0262>
- Kähkönen, T. (2020). Employee trust repair after organizational change. *Journal of Organizational Change Management*, 33(6), 1143–1161. <https://doi.org/10.1108/JOCM-05-2020-0136>
- Kaur Bagga, S., Gera, S., & Haque, S. N. (2023). The mediating role of organizational culture: Transformational leadership and change management in virtual teams. *Asia Pacific Management Review*, 28(2), 120–131. <https://doi.org/10.1016/j.apmr.2022.07.003>
- Kavanagh, M. J., Gueutal, H. G., & Tannenbaum, S. I. (1990). *Human resource information systems: Development and application*. <https://cir.nii.ac.jp/crid/1130282269153369728>

- Kavanagh, M. J., & Johnson, R. D. (2017). *Human resource information systems: Basics, applications, and future directions*. Sage Publications. [https://books.google.com/books?hl=en&lr=&id=3TxbDgAAQBAJ&oi=fnd&pg=PP1&dq=Kavanagh,+M.+J.,+%26+Johnson,+R.+D.+\(Eds.\).+\(2017\).+Human+resource+information+systems:+Basics,+applications,+and+future+directions.+Sage+Publications.&ots=p11PbBDGiV&sig=8RvVDRJDqKSiDgJop4doKrLUc0I](https://books.google.com/books?hl=en&lr=&id=3TxbDgAAQBAJ&oi=fnd&pg=PP1&dq=Kavanagh,+M.+J.,+%26+Johnson,+R.+D.+(Eds.).+(2017).+Human+resource+information+systems:+Basics,+applications,+and+future+directions.+Sage+Publications.&ots=p11PbBDGiV&sig=8RvVDRJDqKSiDgJop4doKrLUc0I)
- Khaw, K. W., Alnoor, A., AL-Abrrow, H., Tiberius, V., Ganesan, Y., & Atshan, N. A. (2023). Reactions towards organizational change: A systematic literature review. *Current Psychology*, 42(22), 19137–19160. <https://doi.org/10.1007/s12144-022-03070-6>
- Köhler, A. R., & Som, C. (2014). Risk preventative innovation strategies for emerging technologies the cases of nano-textiles and smart textiles. *Technovation*, 34(8), 420–430. <https://doi.org/10.1016/j.technovation.2013.07.002>
- Kossyva, D., Theriou, G., Aggelidis, V., & Sarigiannidis, L. (2023). Retaining talent in knowledge-intensive services: Enhancing employee engagement through human resource, knowledge and change management. *Journal of Knowledge Management*, 28(2), 409–439. <https://doi.org/10.1108/JKM-03-2022-0174>
- Kovach, K. A., Hughes, A. A., Fagan, P., & Maggitti, P. G. (2002). Administrative and strategic advantages of HRIS. *Employment Relations Today*, 29(2), 43–48. <https://doi.org/10.1002/ert.10039>
- Krishnan, S. K., & Singh, M. (2007). Issues and Concerns in the Implementation and Maintenance of HRIS. *Management and Labour Studies*, 32(4), 522–540. <https://doi.org/10.1177/0258042X0703200407>
- Kuan, K. K., & Chau, P. Y. (2001). A perception-based model for EDI adoption in small businesses using a technology–organization–environment framework. *Information & Management*, 38(8), 507–521. [https://doi.org/10.1016/S0378-7206\(01\)00073-8](https://doi.org/10.1016/S0378-7206(01)00073-8)
- Kumar, M. A., & Ayedee, D. N. (2020). *Technology Adoption: A Solution for SMEs to Overcome Problems during COVID-19*. Social Science Research Network. <https://papers.ssrn.com/abstract=3745814>
- Kumar, N. A., & Parumasur, S. B. (2013). Managerial Perceptions of the Impact of HRIS on Organizational Efficiency. *Journal of Economics and Behavioral Studies*, 5(12), 861–875. <https://doi.org/10.22610/jebs.v5i12.459>
- Lapointe, L., & Rivard, S. (2005). A Multilevel Model of Resistance to Information Technology Implementation. *MIS Quarterly*, 29(3), 461–491. <https://doi.org/10.2307/25148692>
- Lauzier, M., Lemieux, N., Montreuil, V.-L., & Nicolas, C. (2020). On the transposability of change management research results: A systematic scoping review of studies published in JOCM and JCM. *Journal of Organizational Change Management*, 33(5), 859–881. <https://doi.org/10.1108/JOCM-12-2018-0366>
- Lengnick-Hall, M. L., & Moritz, S. (2003). The impact of e-HR on the human resource management function. *Journal of Labor Research*, 24(3), 365. <https://doi.org/10.1007/s12122-003-1001-6>
- Maamari, B. E., & Osta, A. (2021). The effect of HRIS implementation success on job involvement, job satisfaction and work engagement in SMEs. *International Journal of Organizational Analysis*, 29(5), 1269–1286. <https://doi.org/10.1108/IJOA-07-2020-2298>
- Madrid-Guijarro, A., Garcia, D., & Van Auken, H. (2009). Barriers to Innovation among Spanish Manufacturing SMEs. *Journal of Small Business Management*, 47(4), 465–488. <https://doi.org/10.1111/j.1540-627X.2009.00279.x>
- Maier, A. M., Moultrie, J., & Clarkson, P. J. (2012). Assessing Organizational Capabilities: Reviewing and Guiding the Development of Maturity Grids. *IEEE Transactions on Engineering Management*, 59(1), 138–159. <https://doi.org/10.1109/TEM.2010.2077289>
- Maruru, D. G. (2014). *Human resource information system and decision making in the Ministry of Health*. <https://erepository.uonbi.ac.ke/handle/11295/76277>
- McDonald, R. P., & Ho, M.-H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64. <https://doi.org/10.1037/1082-989X.7.1.64>
- Mehmood, T. (2021). Does Information Technology Competencies and Fleet Management Practices lead to Effective Service Delivery? Empirical Evidence from E- Commerce Industry. *International Journal of Technology Innovation and Management (IJTIM)*, 1(2), Article 2. <https://doi.org/10.54489/ijtim.v1i2.26>
- Menant, L., Gilibert, D., & Sauvezon, C. (2021). The Application of Acceptance Models to Human Resource Information Systems: A Literature Review. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.659421>
- Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11(3), 299–326. [https://doi.org/10.1016/S1053-4822\(00\)00053-X](https://doi.org/10.1016/S1053-4822(00)00053-X)
- Minbaeva, D. (2021). Disrupted HR? *Human Resource Management Review*, 31(4), 100820. <https://doi.org/10.1016/j.hrmr.2020.100820>
- Mohlala, T., Mehlwana, L., Nekhavhambe, U., Thango, B., & Lerato, M. (2024). *Strategic Innovation in HRIS and AI for Enhancing Workforce Productivity in SMEs: A Systematic Review*. Social Science Research Network. <https://doi.org/10.2139/ssrn.4968457>
- Moussa, M., Nyamrunda, F., Abedin, E., & Somjai, K. (2025). A Qualitative Examination of Human Resource Information Systems (HRISs): A Strategic Tool for SMEs in Northern Thailand. In M. Moussa & A. McMurray (Eds.), *The Palgrave Handbook of Breakthrough Technologies in Contemporary Organisations* (pp. 13–25). Springer Nature. https://doi.org/10.1007/978-981-96-2516-1_2
- Nankervis, A., Connell, J., Cameron, R., Montague, A., & Prikshat, V. (2021). ‘Are we there yet?’ Australian HR professionals and the Fourth Industrial Revolution. *Asia Pacific Journal of Human Resources*, 59(1), 3–19. <https://doi.org/10.1111/1744-7941.12245>

- Narang, L., & Singh, L. (2011). Human Resource Practices and Perceived Organizational Support—A Relationship in Indian Context. *Management and Labour Studies*, 36(3), 217–224. <https://doi.org/10.1177/0258042X1103600301>
- Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review*, 35(3), 297–314. <https://doi.org/10.1108/00483480610656702>
- Noutsu, F. A., Kala Kamdjoug, J. R., & Fosso Wamba, S. (2017). Acceptance and Use of HRIS and Influence on Organizational Performance of SMEs in a Developing Economy: The Case of Cameroon. In Á. Rocha, A. M. Correia, H. Adeli, L. P. Reis, & S. Costanzo (Eds.), *Recent Advances in Information Systems and Technologies* (pp. 563–580). Springer International Publishing. https://doi.org/10.1007/978-3-319-56535-4_57
- Noutsu Fobang, A., Fosso Wamba, S., & Kala Kamdjoug, J. R. (2019). Exploring Factors Affecting the Adoption of HRIS in SMEs in a Developing Country: Evidence from Cameroon. In Y. Baghdadi & A. Harfouche (Eds.), *ICT for a Better Life and a Better World* (Vol. 30, pp. 281–295). Springer International Publishing. https://doi.org/10.1007/978-3-030-10737-6_18
- Oldemeyer, L., Jede, A., & Teuteberg, F. (2024). Investigation of artificial intelligence in SMEs: A systematic review of the state of the art and the main implementation challenges. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-024-00405-4>
- Palmucci, D. N. (2024). Decision making in human resources standard practices and change management innovation initiatives: The common destiny of being affected by biases. *EuroMed Journal of Business*, 19(4), 736–751. <https://doi.org/10.1108/EMJB-11-2022-0208>
- Park, S., & Park, S. (2021). How can employees adapt to change? Clarifying the adaptive performance concepts. *Human Resource Development Quarterly*, 32(1), E1–E15. <https://doi.org/10.1002/hrdq.21411>
- Peng, J., Li, M., Wang, Z., & Lin, Y. (2021). Transformational Leadership and Employees' Reactions to Organizational Change: Evidence From a Meta-Analysis. *The Journal of Applied Behavioral Science*, 57(3), 369–397. <https://doi.org/10.1177/0021886320920366>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879. <https://doi.org/10.1037/0021-9010.88.5.879>
- Podsakoff, P. M., & Organ, D. W. (1986). Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management*, 12(4), 531–544. <https://doi.org/10.1177/014920638601200408>
- Potosky, D., & Azan, W. (2023). Leadership behaviors and human agency in the valley of despair: A meta-framework for organizational change implementation. *Human Resource Management Review*, 33(1), 100927. <https://doi.org/10.1016/j.hrmr.2022.100927>
- Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small businesses. *Omega*, 27(4), 467–484. [https://doi.org/10.1016/S0305-0483\(98\)00071-1](https://doi.org/10.1016/S0305-0483(98)00071-1)
- Qirim, N. A. (2006). The role of the government and E-Commerce adoption in small businesses in New Zealand. *International Journal of Internet and Enterprise Management*, 4(4), 293. <https://doi.org/10.1504/IJIEEM.2006.011042>
- Quaosar, G. M. A. A., & Rahman, M. S. (2021). Human Resource Information Systems (HRIS) of Developing Countries in 21st Century: Review and Prospects. *Journal of Human Resource and Sustainability Studies*, 9(3), Article 3. <https://doi.org/10.4236/jhrss.2021.93030>
- Rammel, C., & van den Bergh, J. C. J. M. (2003). Evolutionary policies for sustainable development: Adaptive flexibility and risk minimising. *Ecological Economics*, 47(2), 121–133. [https://doi.org/10.1016/S0921-8009\(03\)00193-9](https://doi.org/10.1016/S0921-8009(03)00193-9)
- Rammer, C., Czarnitzki, D., & Spielkamp, A. (2009). Innovation success of non-R&D-performers: Substituting technology by management in SMEs. *Small Business Economics*, 33(1), 35–58. <https://doi.org/10.1007/s11187-009-9185-7>
- Rasool, S. F., Samma, M., Mohelska, H., & Rehman, F. U. (2023). Investigating the nexus between information technology capabilities, knowledge management, and green product innovation: Evidence from SME industry. *Environmental Science and Pollution Research*, 30(19), 56174–56187. <https://doi.org/10.1007/s11356-023-26308-7>
- Ritchie, J., Ormston, R., McNaughton Nicholls, C., & Lewis, J. (2013). *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (pp. 1–456).
- Rousseau, D. M., & ten Have, S. (2022). Evidence-based change management. *Organizational Dynamics*, 51(3), 100899. <https://doi.org/10.1016/j.orgdyn.2022.100899>
- Rusilowati, U., Narimawati, U., Wijayanti, Y. R., Rahardja, U., & Al-Kamari, O. A. (2024). Optimizing Human Resource Planning through Advanced Management Information Systems: A Technological Approach. *Aptisi Transactions on Technopreneurship (ATT)*, 6(1), 72–83. <https://doi.org/10.34306/att.v6i1.390>
- Sabherwal, R., Jeyaraj, A., & Chowa, C. (2006). Information System Success: Individual and Organizational Determinants. *Management Science*, 52(12), 1849–1864. <https://doi.org/10.1287/mnsc.1060.0583>
- Sadiq, U., Khan, A. F., Ikhlaiq, K., & Mujtaba, B. G. (2013). The Impact of Information Systems on the Performance of Human Resources Department. In *Strategic Human Resource Management at Tertiary Level*. River Publishers.
- Salavou, H., Baltas, G., & Lioukas, S. (2004). Organisational innovation in SMEs: The importance of strategic orientation and competitive structure. *European Journal of Marketing*, 38(9/10), 1091–1112. <https://doi.org/10.1108/03090560410548889>

- Salman, M., Ganie, S. A., & Saleem, I. (2020). Employee Competencies as Predictors of Organizational Performance: A Study of Public and Private Sector Banks. *Management and Labour Studies*, 45(4), 416–432. <https://doi.org/10.1177/0258042X20939014>
- Sánchez-Medina, P. S. (2020). Organizational capability for change and performance in artisanal businesses in Mexico. *Journal of Organizational Change Management*, 33(2), 415–431. <https://doi.org/10.1108/JOCM-06-2018-0157>
- Satispi, E., Rajiani, I., Murod, M., & Andriansyah, A. (2023). Human Resources Information System (HRIS) to Enhance Civil Servants' Innovation Outcomes: Compulsory or Complimentary? *Administrative Sciences*, 13(2), Article 2. <https://doi.org/10.3390/admsci13020032>
- Shahadat, M. M. H., Nekmahmud, Md., Ebrahimi, P., & Fekete-Farkas, M. (2023). Digital Technology Adoption in SMEs: What Technological, Environmental and Organizational Factors Influence in Emerging Countries? *Global Business Review*, 09721509221137199. <https://doi.org/10.1177/09721509221137199>
- Shaikh, A. A., Mumbai, N., Kumar, A., & Syed, A. A. (2021). A TWO-DECADE LITERATURE REVIEW ON CHALLENGES FACED BY SMES IN TECHNOLOGY ADOPTION. 25(3).
- Sharma, C., Sakshi, S., Sharma, S., & Kondal, N. (2023). Role and impact of human resource information system (HRIS) on organizational activities. *AIP Conference Proceedings*, 2558(1), 020070. <https://doi.org/10.1063/5.0123335>
- Shiri, S. (2012). Effectiveness of human resource information system on HR functions of the organization-A cross sectional study. *US-China Education Review*, 9(1), 830–839.
- Shukla, M., & Shankar, R. (2024). Readiness assessment for smart manufacturing system implementation: Multiple case of Indian small and medium enterprises. *International Journal of Computer Integrated Manufacturing*, 37(1–2), 224–242. <https://doi.org/10.1080/0951192X.2023.2228268>
- Song, W., & An, F. (2013). Research on applications of human resource information system in SMEs. *2nd International Conference on Science and Social Research (ICSSR 2013)*, 799–802. <https://doi.org/10.2991/icssr-13.2013.185>
- Spielkamp, A., & Rammer, C. (2006). *Balanceakt Innovation: Erfolgsfaktoren im Innovationsmanagement kleiner und mittlerer Unternehmen*. ZEW-Dokumentation. <https://www.econstor.eu/handle/10419/39146>
- Tamvada, J. P., Narula, S., Audretsch, D., Puppala, H., & Kumar, A. (2022). Adopting new technology is a distant dream? The risks of implementing Industry 4.0 in emerging economy SMEs. *Technological Forecasting and Social Change*, 185, 122088. <https://doi.org/10.1016/j.techfore.2022.122088>
- Telukdarie, A., Dube, T., Matjuta, P., & Philbin, S. (2023). The opportunities and challenges of digitalization for SME's. *Procedia Computer Science*, 217, 689–698. <https://doi.org/10.1016/j.procs.2022.12.265>
- Tenenhaus, M., Amato, S., & Esposito Vinzi, V. (2004). A global goodness-of-fit index for PLS structural equation modelling. *Proceedings of the XLII SIS Scientific Meeting*, 1(2), 739–742. https://www.researchgate.net/profile/Michel-Tenenhaus-2/publication/284462849_A_global_goodness-of-fit_index_for_PLS_structural_equation_modelling/links/5658334908aeafc2aac2895f/A-global-goodness-of-fit-index-for-PLS-structural-equation-modelling.pdf
- Tornatzky, L. G., Fleischer, M., & Chakrabarti, A. K. (1990). *The processes of technological innovation*. <https://cir.nii.ac.jp/crid/1130000796720150784?>
- Udekwe, E., & de la Harpe, A. C. (2017). The use of human resource information systems in two retail organisations in the Western Cape, South Africa. *SA Journal of Human Resource Management*, 15, 7. <https://doi.org/10.4102/sajhrm.v15i0.827>
- Ullman, M. T. (2006). The declarative/procedural model and the shallow structure hypothesis. *Applied Psycholinguistics*, 27(1), 97–105.
- Vardaman, J. M., Chew, S. L., Zhou, F., Hargrove, D. C., Raddatz, P. A., Datta, A., & Tabor, W. E. (2024). Yes, We Can! A Job Embeddedness Perspective on Employee Change Acceptance. *Journal of Change Management*, 24(1), 69–82. <https://doi.org/10.1080/14697017.2023.2271025>
- Wahid, S. A. A., Mohammad, N., Islam, R., Faisal, M. H., & Rana, M. S. (2024). Evaluation of Information Technology Implementation for Business Goal Improvement under Process Functionality in Economic Development. *Journal of Data Analysis and Information Processing*, 12(2), Article 2. <https://doi.org/10.4236/jdaip.2024.122017>
- Wakabi, R., & Matovu, M. (2024). Adoption of Human Resource Information System across East African SME's. A Systematic Review. *International Journal of Multidisciplinary Studies on Management, Business, and Economy*. <https://doi.org/10.21608/ijmsbe.2025.302900.1015>
- Wilson-Evered, E., & Härtel, C. E. J. (2009). Measuring attitudes to HRIS implementation: A field study to inform implementation methodology. *Asia Pacific Journal of Human Resources*, 47(3), 374–384. <https://doi.org/10.1177/1038411109106863>
- Yap, C. S. (1989). Issues in Managing Information Technology. *Journal of the Operational Research Society*, 40(7), 649–658. <https://doi.org/10.1057/jors.1989.108>
- Yilmaz, S., Ozgen, H., & Akyel, R. (2013). The impact of change management on the attitudes of Turkish security managers towards change: A case study. *Journal of Organizational Change Management*, 26(1), 117–138. <https://doi.org/10.1108/09534811311307941>
- Yusliza, M. Y., & Ramayah, T. (2012). Determinants of attitude towards E-HRM: An empirical study among HR professionals. *Procedia-Social and Behavioral Sciences*, 57, 312–319. <https://doi.org/10.1016/j.sbspro.2012.09.1191>

Zhu, K., & Kraemer, K. L. (2005). Post-Adoption Variations in Usage and Value of E-Business by Organizations: Cross-Country Evidence from the Retail Industry. *Information Systems Research*, 16(1), 61–84. <https://doi.org/10.1287/isre.1050.0045>