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Influence of User Characteristics on the Effectiveness of LGAs' Human Resource Information System in Tanzania

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Abstract*:* The implementation of the Human Resource Information System (HRIS) in Local Government Authorities (LGAs) in Tanzania aimed at addressing shortcomings of methods in managing employee's information. The shortcomings primarily involved outdated data concerning civil servants. This study explored how user characteristics impact the effectiveness of HRIS in Tanzanian LGAs, specifically focusing on information timeliness, completeness and accuracy. The study covered Mwanza, Arusha, Dodoma, Morogoro, Iringa and Kagera Regions. A questionnaire and an interview guide were used for data collection from 213 participants sampled form 249 HR stakeholders. A total of 201 respondents participated in the study. An ordered logistic regression model was employed for data analysis. The findings revealed that user characteristics such as IT skills, commitment and experience have an influence on the HRIS effectiveness. Therefore, it is crucial to prioritize IT skills training to foster commitment among HRIS staff and promote knowledge sharing among in order to ensure successful implementation of HRI within the LGAs.

Keywords: User characteristics, Effectiveness, Human Resource Information System, Local Government Authorities.

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Introduction

The 21st century has seen advancements in science and technology, which have had an impact on how the Human Resource Management (HRM) operates. These advancements have made Human Resources (HR) processes like payroll administration, performance evaluation and recruitment to be performed in an efficient manner (Wairimu & Karanja 2016). In contrast, a hundred years ago, HRM relied heavily on procedures to keep track of personnel records. Unfortunately, this fashioned system was highly inefficient and labour intensive. It faced challenges such as delays in accessing employees' personal data errors caused by a backlog of paperwork concerns about the security of personnel information and the difficulty of granting employees' access to their confidential records, also manual record keeping results to incomplete, inaccurate and untimely information (Akoyo & Muathe 2017). Additionally, because all employee data had to be stored at offices or government entities under the manual system, it created obstacles, for employees trying to access their information quickly in remote locations (Simba & Mwangu, 2016).

The field of Human Resource Information Systems (HRIS) has witnessed advancements and adaptations due to the progress in science and technology in the realm of information and communication technology (ICT). This has led to a shift from manual processes to automated HRIS. HRM, which encompasses HR activities and processes along with the utilization of ICT form the core components of the HRIS (Kroenke, 2018). These elements collaborate to enable organizations to collect, manipulate, store, analyse, retrieve and share information about their resources (Jahan, 2018). Scholars such as Ahmer (2015) and Nagendra and Deshpande (2018) have highlighted the role played by HRIS in managing employee's data such as profiles, attendance records, salary administration, promotions, recruitment data, personal histories, leave records, retirement information and training achievements. Additionally, Matimbwa et al. (2021) asserted that HRIS provides organizations with insights into their personnel. Consequently, the integration of HRIS components enhances the validity, reliability and usefulness of the HRM outcomes by providing detailed information. Because of these factors, the Tanzanian government decided to introduce the HRIS as a way to upgrade the manual record keeping system.

HRIS emerged in the 1970s in high income countries, such as the United States of America. During this period, many prominent organizations implemented personnel data systems marking a milestone in enhancing HR operations through provision of information (Opiyo, 2015). The intention behind this shift was to enhance the efficiency and effectiveness of the HR departments. Subsequently, with the aid of technology transfer initiatives, HRISs influence expanded globally reaching other countries such as Bangladesh (Chowdhury et al., 2013), Kenya (Atika, 2011), Uganda (Spero et al., 2011) and Fhana Ghana (Ankrah & Sokro 2012). As a result of its adoption, HRIS utilization experienced a significant surge by approximately 40% (Wairimu & Karanja 2016). This trend signifies the growing acknowledgment of HRIS as a tool, for enhancing HR operations in most organizations.

To support Human Resource Officers (HROs) working in the sector, Tanzania adopted the HRIS in 2011. The primary objective was to simplify the management of comprehensive personnel records as well as to enable timely updates of employees' data (Opiyo, 2015). Initially introduced in ministries under the government, this system was later extended to Local Government Authorities (LGAs) which are responsible for local administration in Tanzania. HROs received training alongside the implementation of the HRIS in LGAs. The purpose of this training was to enhance their proficiency in the system and to enable them to generate up to date information about government employees. Despite using HRIS for over a decade, certain challenges persisted. These include the presence of ghost workers on payroll records and incomplete records within the public service sector (Mgonja & Tundui 2022). As of August 2016, Tanzania's national workforce comprised 523,400 employees. Surprisingly, among these figures 19,700 individuals were categorized as ghost workers; there were also 9,932 servants without credentials and over 1,500 cases where multiple employees shared identical academic qualifications. Furthermore, as stated by Akwei, et al. (2017), 11,500 civil servants had incomplete records.

Previous studies on HRIS overlooked the significance of user characteristics in determining system effectiveness. Instead, these studies primarily focused on the impact and challenges of HRIS on decision making as demonstrated by Jorojick (2015) and Matimbwa and Masue (2019). While a few studies, such as Akoyo and Muathe (2017) acknowledged the role of user characteristics in shaping the HRIS effectiveness, there is still a gap on how user characteristics, including IT proficiency, HR expertise, commitment, experience and educational qualifications influence the HRIS effectiveness within Tanzanian LGAs. Therefore, this study sought to establish the relationship between user characteristics and HRIS effectiveness in the Tanzanian LGAs.

Literature Review

Theoretical Framework

This study was underpinned by the Integrated Management Competence Model (IMCM), which is an explanatory tool that identifies knowledge, skills, abilities, traits, behavior and commitment needed to enable effective performance of tasks embedded in a particular job (Lucia & Lepsinger, 1999) For this model to be considered useful, competencies must comply with an individual's job activities (Vathanophas & Thaingam, 2007) Competencies are

examined from vertical and horizontal points of view. Vertically, the framework of competence is a tool that draws individual and organizational capabilities towards the mission and strategy of an organization. Horizontally, the framework is used for different purposes in HRM for selection, career planning, and succession planning and performance management. Competencies, therefore, constitute common languages that enable organizations to ensure the human resource effective performance (Wickramasinghe & De Zoyza, 2009).

The IMCM is relevant to this study as it allowed the researchers to formulate user' characteristics variables (skills, knowledge, experience, commitment and education qualification) which might influence the adoption and proper implementation of the HRIS in LGAs. The objective of HRIS was to improve the maintenance of employees' information for decision-making processes by HROs, although it was difficult to attain.

Empirical Literature

User Characteristics

HRIS has been widely adopted by organizations to enhance their HR management. The effectiveness of the HRIS relies on factors including the characteristics of its users. Literature review provides a summary of studies that examined how user characteristics impact the effectiveness of the HRIS. Empirical findings indicate that computer self-efficacy, computer anxiety and computer literacy are user traits that influence the effectiveness of the HRIS. Research demonstrates that individuals with levels of computer self-efficacy are more likely to adopt and use the HRIS effectively (Choi & Kim 2017; Ragu et al., 2018). Computer self-efficacy refers to an individual's belief in their ability to proficiently utilize computer-based technologies.

Studies suggest that individuals with levels of computer self-efficacy are more inclined to efficiently utilize the HRIS (Li et al., 2020). Similarly, computer anxiety—defined as fear or discomfort when using computers or interacting with computer systems—is identified as a user trait that negatively impacts the effectiveness of HRIS (Kazm, et al. 2017). Individuals with levels of computer anxiety may be less likely to use the HRIS or may require additional training and support to efficiently navigate the system. Moreover, people who possess computer skills are inclined to utilize HRIS with proficiency and effectiveness (Li et al., 2020). Conversely individuals lacking computer knowledge might encounter difficulties while navigating the system, necessitating guidance and training.

According to a study conducted by Aziz et al. (2022)., various factors such, as skill level, educational background, training, professional qualifications and user attitudes towards technology can impact the timeliness, completeness and accuracy of information. Another study by Matimbwa et al. (2021) revealed that inadequate training negatively affects the utilization rate of information systems. Additionally, Barus et al. (2017) found a relationship between user competence (including skills, knowledge and experience) and the quality of accounting information system management. However, despite these findings, there is still a research gap regarding how user characteristics influence the HRIS effectiveness, within the LGAs.

Parameters of User Characteristics

Timeliness, completeness and accuracy are important user characteristics that can impact the quality and effectiveness of the information systems. Timeliness refers to the extent to which information is available when it is needed. Completeness refers to the extent to which information includes all relevant data and accuracy refers to the correctness and precision of the information provided. In a study conducted by Yang et al. (2019), the researchers found that timeliness is an important factor in the perceived quality of information systems. Participants in the study rated information systems that provided timely information as more useful than those that did not. This highlights the importance of providing users with information in a timely manner to improve the perceived quality of the system.

Completeness is also an important factor in user satisfaction with information systems. In a study by Wang and Shih (2018), the researchers found that users were more satisfied with systems that provided complete information compared to those that did not. This suggests that providing users with all the relevant data can improve their satisfaction with the system.

Accuracy is another important characteristic that can impact the effectiveness of information

systems. In a study by Lee and Kozar (2012), the researchers found that users were more likely to trust and use the information systems that provided accurate information. This highlights the importance of ensuring that information provided by information systems is correct and precise. Timeliness, completeness and accuracy are therefore important user characteristics that can influence the perceived quality and effectiveness of information systems. Therefore, it is important for designers and developers of information systems to consider these factors when designing and implementing their systems.

Methodology

Design

The study used the explanatory cross-sectional sequential design of mixed methods. The study is explanatory in nature because it broadly examined user characteristics in LGAs with the intention of explaining their causal-effect relationship with HRIS effectiveness in very complex and multivariate cases. The cross-sectional data collection method was further adopted in the study because data collection, analysis and interpretation were conducted at the same time.

Population and Sampling

Tanzania mainland has a total 26 regions which in this study were divided into nine with high challenges, nine with medium challenges and seven with low challenges. From each of the three categories, two regions were randomly sampled so that Arusha and Mwanza represented those regions with high challenges, Morogoro and Dodoma represented those with medium challenges and Kagera and Iringa represented those with low challenges. The six randomly sampled regions had a total of 249 HRs from whom 213 were randomly sampled to participate in the stud. Out of the sampled individuals, only 201 participated in the study. Therefore, the response rate was 94.4%.

Data Collection Instruments

The study used a questionnaire and an interview guide in data collection. The actual data collection process involved a face-to-face questionnaire administration whereby the researchers directly asked the human resources officers a series of questions, and the respondents' answers were recorded on the questionnaires alongside the respective questions. To streamline and expedite this process, the researchers worked with two research assistants. Qualitative data was gathered through in-depth interviews conducted with key informants chosen based on their extensive knowledge of HR Information Systems (HRIS). These key informants included Human Resource Officers (HROs), particularly those who held roles as approvers, as well as the Ministry officials and Directors of the Human Capital Division. A total of six HROs serving as approvers and two Directors of the Human Capital Division were interviewed.

Validity and Reliability

To ensure validity, the questionnaire was pilot-tested with 30 randomly selected respondents, who were not part of the actual survey sample. HROs who participated in the pilot testing were from Iringa, Dodoma and Morogoro Regions. The exercise was facilitated by the researchers and the two research assistants who underwent two-day's training. The researchers interviewed the first 10 respondents while each assistant interviewed 10 respondents in the presence of the researchers to determine any areas of weakness and plan appropriate measures. To enhance reliability, Fieldwork assistants were trained to ensure that they were conversant with the study objectives and that they were confident and could accurately use the research instruments. Training of research assistants (enumerators) was aimed at reducing their role-restricted effects on responses and enhancing data quality. Data from pilot testing was subjected to an internal consistency test using the Cronbach's Alpha coefficient. Due to the types of questions, it was not feasible to test the complete questionnaire for internal consistency. However, two questionnaire domains were tested to establish whether the items measuring the domains are internally consistent. The domains tested for internal consistency were: 1) user characteristics (i.e., their level of information technology skills, level of human resource knowledge, level of organizational commitment, years of experience in the current position and level of education). The findings indicated that items for the questionnaire were internally consistent. The use of two sources of data further enhanced the reliability through data triangulation.

Statistical Treatments of Data

The respondents' preliminary information was analyzed using descriptive statistics in terms of

frequency and cross tabulation. To establish the influence of user characteristics on the HRIS effectiveness, the study employed the ordered logistic regression model. User characteristics comprising IT skills, HR knowledge, education qualification, work experience and employees' commitment were measured using ordinal and continuous scales. In building the model, user characteristics were treated as predictor variables whereby effectiveness in terms of timeliness, completeness and accuracy were the dependent variable constructs. The use of Ordered logistic regression model was due to the following reason (i) The dependent variable, that is HRIS effectiveness, is best measured at the ordinal level (ii) Ordinal independent variables are continuous and categorical, (iii)there is no multicollinearity (i.e., explanatory variables are not closely related, (iv) Each independent variables has an identical effect at each cumulative split of the dependent variable and the relationship between a pair of outcomes is the same, and (v) the effects of explanatory variables are consistent or proportional across thresholds.

Equation 2 presents the model specifications:

$$Prob(Y) = \beta_0 + \beta_{ij} X_{ij} + \ldots + \beta_n X_n + \varepsilon \quad \ldots\ldots\ldots 2$$

Where:

Y = HRIS effectiveness in LGAs (ordered to be measured by Five Point Likert Scale of timeliness of information, Completeness of information and Accuracy of information).

β0 = Constant term

βij– βnj = Explanatory indicators (coefficient estimates) of predictor 'i' to 'n' in setting j

Xij – Xij= Predictor 'i' to 'n' of Y in setting j in this study, predictors are user characteristics,

ε = Normally Distributed Error Term

The dependent variables were categorically measured through a five-point Likert scale and the responses were ranked as 1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree. These categories allowed participants to express their agreement or disagreement with various statements related to the dependent variables. User characteristics were measured using the combination of continuous and categorical variables. Experience and education qualifications were treated as continuous variables while variables such as IT skills, HR knowledge and commitment level were considered categorical.

Before proceeding with the modelling procedure, the study addressed the issue of multicollinearity among user characteristics, which occurs when independent variables are highly correlated with one another. In this study, a correlation coefficient (r) threshold of 0.9 or higher was set as the cutoff point to detect multicollinearity (Pallant, 2005). The correlation matrix results (not presented here due to space constraints) indicated that the highest correlation observed was r = 0.401, which did not exceed the threshold. Consequently, all variables were included in the modelling process, as none was excluded on the basis of multicollinearity. For qualitative data analysis, content analysis was employed. Content analysis is a method used to condense and categorize large volumes of information or communication into a set of categories that represent specific characteristics relevant to the research. In this study, content analysis was utilized to generate insights and information that could elucidate the state of HRIS effectiveness in enhancing employees' information management within the selected LGAs.

Ethical Considerations

In fulfilling ethical requirements, the following ethical principles were observed throughout the research process: First, the researchers obtained research clearance from relevant authorities. Secondly, respondents were not coerced into participating in the study. Thirdly, participants were informed of the purpose, procedures (such as audio recordings), and the consequences of their participation to allow them make an informed decision to participate or decline. Next, questions were carefully framed and posed to avoid any psychological harm of participants, and lastly to ensure confidentiality, codes or pseudonyms were used in place of respondents' actual names.

Findings and Discussions

The findings of the study have been organized based on the general distribution of the user characteristics, then distribution of the user characteristics based on high, medium and low level of HRIS characteristics and the influence of each user characteristic on HRIS effectiveness.

Distribution of Users' Characteristics

Table 1 presents the distribution of user characteristics in the sampled LGAs. Overall, the findings show that 44 percent of the interviewed HROs had inadequate IT skills while 52 percent were highly knowledgeable about the human resource management. This study suggests poor record management might be attributed to limited ICT skills among human resource officers. The findings imply that it is important for LGAs to invest in human capital to achieve effectiveness, productivity and efficiency. This observation is consistent with the findings in other HRIS scholars such as Kassam (2015) who recommended a sustainable improvement availability and accessibility of facilities of ICT skills among HRIS users to enhance the use of the HRIS in performing HR functions. In addition, HR knowledge was found to be high among HROs, which perhaps explains fewer irregularities in regions with low challenges of HRIS as these regions recorded fewer number of ghost workers, fewer number of employees with incomplete records. The findings show further that the majority (72%) of HROs interviewed indicated being highly committed to their employer (organization). Regarding work experience, 56 percent indicated having working experience of between 4 to 7 years. According to previous findings, work experience increases the effectiveness of the HRIS use; that is, those with sufficient experience may perform better than is the case with their inexperienced counterparts. Sebele-Mpofu and Serpa (2020) found that work experience has a positive influence on employment outcomes for graduates in the UK.

Table 1: Distribution of User Characteristics

User' Characteristics	Responses	N (%)
Level of information technology skills	Low level	89(44)
	Neither high nor low	70(35)
	High level	42(21)
Level of Human Resource knowledge	Low level	16(8)
	Neither high nor low	80(40)
	High level	105(52)
Level of Commitment to the Organization	Low level	1(0.5)
	Neither high nor low	56(28)
	High level	144(72)
Years of experience in the current position	Less than three years	49(24)
	4-7 years	113(56)
	8-11 years	28(14)
	12-15 years	10(5)
	Above 15 years	1(0.5)
Level of Education	Diploma/Certificate	8(4)
	Bachelor degree	163(81)
	Masters	30(15)

As for education levels of HROs, the findings in Table 1 show that majority (over 80 percent) had bachelor's degrees. These findings suggest that HROs have sufficient education to help them produce quality information as competent system users as supported by Puspitarini, et al, 2018).

Therefore, education plays a pivotal role as a significant variable in this study. The level of education is a critical factor because individuals with higher educational qualifications tend to be more inclined to adopt and adapt to innovations when

compared to individuals with lower levels of education. This is because higher education equips individuals with the knowledge and cognitive skills that are often necessary for effectively engaging with and utilizing innovative technologies. Supporting this notion, Ibrahim et al. (2018) noted that the level of education exerts the most pronounced influence on the utilization of the HRIS. Their observation aligns with the idea that individuals with higher education levels are more likely to engage with and effectively employ HRIS due to their educational backgrounds, which provide them with the requisite knowledge and analytical capabilities. Furthermore, Materu (2017) emphasized that individuals with higher levels of education are generally more inclined to use ICT. This inclination arises from the fact that higher education not only imparts greater ICT-related skills but also offers individuals more opportunities to engage with online platforms and technologies. Consequently, education emerges as a crucial variable in shaping individuals' readiness and capacity to embrace and utilize technology-driven innovations like HRIS.

User Characteristics across Regions with High, Moderate and Low Levels of HRIS Challenges

Table 2 presents the distribution of user' characteristics, which varied across regions with high, moderate and low levels of HRIS challenges. From Table 2, the findings show that HROs who had sufficient information technology skills, human resource knowledge and committed to the organisation were found in regions with low level of HRIS challenges (i.e., in low category).

The difference in responses across three categories using the Chi-square tests were statistically significant with χ^2 =27.125 at p = <.001 for ICT skills, χ^2 =40.531 at p = <.001 for HR knowledge χ^2 =23.310 at p =<.001 for commitment to the organisation. The difference in responses across three categories using the Chi-square tests were statistically significant with χ^2 =27.125 at p = <.001 for ICT skills, χ^2 =40.531 at p = <.001 for HR knowledge χ^2 =23.310 at p =<.001 for commitment to the organisation. Thus, HROs with adequate ICT skills are more competent in using the system than is the case with their counterparts. These findings are consistent with the findings of Hertati and Zarkasyi (2015) who asserted that a combination of user's knowledge, expertise and commitment culminated to quality information in terms of preciseness and completeness.

Regarding work experience, the findings were almost equally distributed across the three categories. However, regions categorized as medium and low had a relatively higher number of HROs with 8–11 years of work experience compared to regions categorised as high, which imply that in this case, experience has no impact on the effectiveness of HR; this could be explained by the fact that having experience in work is one thing, but what matter most is experience in using HRIS in organization (Table 2). The education level of HROs across the three categories shows that regions with higher challenges had more HROs who had bachelor's and master's degrees compared to regions with medium and low levels of HRIS challenges. However, the difference across the three categories was statistically not significant with χ^2 =3.453 at p = 0.485 (Table 2). These findings suggest that having a degree alone is insufficient in ensuring that employees are competent system users. This incompetence is attributed to the fact that HROs lack college training in the system's application. Thus, curriculum review could effectively address this anomaly. The findings on education contradict the Integrated Management Competence Model, implying that for a person to produce the required results, he/ she must be highly educated (Materu, 2017).

Influence of User' Characteristics on the HRIS Effectiveness

Based on the pertinent model information, the entered data was sufficiently compatible with the models and at least one of the predictors exhibited a significant relationship with the response variable. The Goodness-of-Fit results indicate that among the three models, timeliness does not fit well (p = 0.004). In contrast, the remaining variables, namely completeness and accuracy have substantial p-values, suggesting a strong alignment between the model and the data.

The findings from the Pseudo R-square Statistics (pseudo-R2 values) (i.e., Nagelkerke values for timeliness = 0.251, completeness = 10.3% and accuracy = 10.3%) imply that the model incorporating user characteristics is an inadequate predictor of the outcome

Table 2: User characteristics and levels of HRIS challenges across Regions

Attributes	Measurement	Level of HRIS challenges			Total	Chi-square	p-value
		High (Arusha and Mwanza)	Medium (Morogoro and Dodoma)	Low (Iringa and Kagera)			
Level of information technology skills	Low level	44(59.5%)	30(43.5%)	15(25.9%)	89(44.3%)	27.125	<.001
	Neither high nor low	21(28.4%)	30(43.5%)	19 (32.8%)	70(34.8%)		
	High level	9(12.2%)	9(13.0%)	24(41.4%)	42(20.9%		
Level of Human Resource knowledge	Low level	9(12.2%)	5(7.2%)	2(3.4%)	16(8.0%)	40.531	<.001
	Neither high nor low	41(55.4%)	33(47.8%)	6(10.3%)	80(39.8%)		
	High level	24(32.4%)	31(44.9%)	50(86.2%)	105(52.2%)		
Level of commitment to the organisation	Low level	1(1.4%)	0(0.0%)	0(0.0%)	1(.5%)	23.310	<.001
	Neither high nor low	29(39.2%)	24(34.8%)	3(5.2%)	56(27.9%)		
	High level	44(59.5%)	45(65.2%)	55(94.8%)	144(71.6%)		
Years of experience in the current position	Less than three years	24(32.4%)	14(20.3%)	11(19.0%)	49(24.4%)	13.694	.090
	4-7 years	42(56.8%)	38(55.1%)	33(56.9%)	113(56.2%)		
	8-11 years	7(9.5%)	10(14.5%)	11(19.0%)	28(13.9%)		
	12-15 years	1(1.4%)	7(10.1%)	2(3.4%)	10(5.0%		
	Above 15 years	0(0.0%)	0(0.0%)	1(1.7%)	1(.5%)		
Level of education	Diploma/Certificate	3(4.1%)	4(5.8%)	1(1.7%)	8(4.0%)	3.453	.485
	Bachelor degree	60(81.1%)	52(75.4%)	51(87.9%)	163(81.1%		
	Master degree	11(14.9%)	13(18.8%)	6(10.3%)	30(14.9%)		
Total		**74**	**69**	**58**	**201**		

The parameter estimates presented in Table 3 offer insights into the impact of predictor variables. The table reveals that the Wald statistic test, commonly utilized for testing the null hypothesis, indicates that user characteristics exert an influence on the HRIS effectiveness. The non-zero Wald statistics signify that user characteristics play a role in the effectiveness of HRIS (i.e., Timeliness, Completeness, and Accuracy), thereby leading to the rejection of the null hypothesis in favour of the alternative hypothesis.

The results in Table 3 present the regression coefficients (β values). Among the five user characteristics, at least one dependent variable exhibited negative β-values, indicating a detrimental influence on the effectiveness of HRIS, while four of the five characteristics for each dependent variable showed a positive impact. Moreover, the findings demonstrate that user characteristics have a statistically significant effect on HRIS effectiveness. Specifically, for timeliness, only two user characteristics, IT skills ($\beta = 0.452$, $p = 0.002$) and employee commitment ($\beta = 0.889$, $p < 0.01$), had a statistically significant impact on the HRIS effectiveness. In the case of completeness, employee commitment ($\beta = 0.464$, $p = 0.031$) and work experience ($\beta = 0.46$, $p = 0.006$) displayed statistically significant influences. Lastly, for accuracy, only one individual characteristic, namely IT skills ($\beta = 0.329$, $p = 0.023$), exhibited a statistically significant effect (see Table 3).

User characteristics with higher influence on the effectiveness of the HRIS based on magnitude of β coefficients for timeliness are Commitment (0.889), IT skills (0.452), HR knowledge (0.32) and work experience (0.234). Education level (-0.098) is the only variable with negative influence on the HRIS effectiveness based on timeliness. For completeness of information generated by the system, most influential user characteristics are commitment (0.464), experience (0.46), IT skill (0.231) and education level (0.159) while HR knowledge had negative influence (-0.027). IT skills (0.329), work experience (0.274), commitment (0.033) were the most influential variables while HR knowledge (-0.052) and education level (-0.162) have negative influence of which education level has the highest negative influence. Study findings suggest that generation of information quality from a system supersedes education qualification a user possesses; this is attributed to trustworthiness and honesty. One of respondents had this to say:

> There are many challenges facing HROs in LGAs but among them is failure to adhere to procedures and regulations. Some officers are generally dishonest and in a number of ways tend to bend various rules for their own benefit or for the benefit of other members in their departments (Director Human Capital Division).

Another officer responding on the weakness of HROs in LGAs submitted that: “Some officers are dishonest and are not committed to their jobs. Also, confidentiality surrounding workers' information is a great challenge although steps like employment contract terminations and legal suits are usually taken against breach of confidentiality” (HRO from the Ministry of Public Service Management and Good Governance). One HRO in Morogoro Municipal observed that:

> There was time the District Education Officer labelled me as lazy and uncommitted owing to delays in effecting new employees' salaries. During the 2014 teachers' employment, I delayed newly employed teachers' salaries whose employment particulars were already loaded in the system. When I made a follow up with the Public Service Commission in Dar es Salaam, I was told that the delay was due to approval delays because the person responsible had been assigned an acting role in another position in the Commission. The DEOs and affected teachers however did not seem to understand the situation upon my return from Dar es Salaam (HRO Morogoro Municipal).

Significance of IT skills, commitment and experience in impacting the effectiveness of HRIS has been highlighted by other researchers. Njau (2017) found that only 43.3 percent of the system's potential is utilized due to a deficiency in IT expertise, which acts as an obstacle to system utilization in Mwanza Municipality. Consequently, having IT skills is a fundamental requirement for the efficient utilization of the system in any organization, including (LGAs).

Table 3: Parameter estimates for user characteristics

Timeliness			Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
								Lower Bound	Upper Bound
	Threshold	[TIMELINESS = 1.00]	0.074	1.87	0.002	1	0.968	-3.59	3.739
		[TIMELINESS = 2.00]	3.535	1.6	4.88	1	0.027	0.399	6.67
		[TIMELINESS = 3.00]	6.237	1.644	14.393	1	<.001	3.015	9.459
		[TIMELINESS = 4.00]	8.837	1.706	26.839	1	<.001	5.494	12.18
	Location	q5.1_IT skill	0.452	0.145	9.705	1	0.002	0.167	0.736
		q5.2_HR knowledge	0.32	0.206	2.414	1	0.120	-0.084	0.724
		q5.3_commitment	0.889	0.234	14.43	1	<.001	0.43	1.348
		q5.4_experience	0.234	0.175	1.801	1	0.180	-0.108	0.577
		q5.5_education level	-0.098	0.338	0.084	1	0.772	-0.761	0.565
Completeness	Threshold	[COMPLETENESS = 1.00]	0.41	1.532	0.072	1	0.789	-2.593	3.413
		[COMPLETENESS = 2.00]	3.373	1.513	4.973	1	0.026	0.409	6.338
		[COMPLETENESS = 3.00]	4.486	1.527	8.625	1	0.003	1.492	7.479
		[COMPLETENESS = 4.00]	6.431	1.561	16.973	1	<.001	3.371	9.49
	Location	q5.1_IT skill	0.231	0.135	2.934	1	0.087	-0.033	0.494
		q5.2_HR knowledge	-0.027	0.194	0.02	1	0.888	-0.407	0.353
		q5.3_commitment	0.464	0.215	4.673	1	0.031	0.043	0.885
		q5.4_experience	0.46	0.168	7.488	1	0.006	0.131	0.789
		q5.5_education level	0.159	0.32	0.246	1	0.620	-0.469	0.786
Accuracy	Threshold	[ACCURACY = 1.00]	-4.667	1.869	6.234	1	.013	-8.331	-1.003
		[ACCURACY = 2.00]	-.593	1.589	.139	1	.709	-3.708	2.523
		[ACCURACY = 3.00]	2.041	1.597	1.633	1	.201	-1.090	5.172
		[ACCURACY = 4.00]	4.678	1.668	7.862	1	.005	1.408	7.947
	Location	q5.1_IT skill	.329	.144	5.183	1	.023	.046	.612
		q5.2_HR knowledge	-.052	.206	.065	1	.799	-.456	.351
		q5.3_commitment	.033	.226	.021	1	.884	-.409	.475
		q5.4_experience	.274	.176	2.417	1	.120	-.072	.620
		q5.5_education level	-.162	.340	.227	1	.634	-.829	.505

This observation aligns with the conclusions drawn from a Human Resources Officer (HRO) who pointed out the challenges faced by approvers when dealing with HR operations in LGAs had this to say,

> ……One of the challenges that baffle me is the rate of computer illiteracy among human resources officers to the extent that some of them cannot even attach documents in PDF format. Similarly, other officers are not updated on policies or systems and it is not uncommon to find a number of them using outdated systems…..

These findings align with the results of prior studies on HRIS. For instance, Kassam (2015) found that individuals with advanced skills and experience in similar technology are more likely to obtain valuable and current information. Similarly, Zote and Tole (2018) identified user characteristics as one of the three primary factors influencing information quality. According to these researchers, achieving higher information quality is contingent on users within organizations possessing the necessary knowledge and skills related to the system. Savalam and Dadhabai (2018) demonstrated the significance of user commitment in accessing timely information. Furthermore, Karikari et al.(2015) and Simba and Mwanga (2016) disclosed that the quality of information generated by the information system hinges on the capabilities of users, including their skills and knowledge.

Regarding commitment, which signifies a state or quality of being dedicated to a cause or activity, the findings indicate that employees who demonstrate commitment are more effective compared to those who are not committed. Commitment is a concept that falls under the "commitment-trust" theory of relationship marketing, as outlined by Barus et al. (2017). This theory posits that relational interactions between a company and its various stakeholders directly lead to cooperative behaviours that are essential for establishing long-term mutually beneficial relationships. Jokonya (2016) identified three components of commitment: "continuance," "normative," and "affective" commitment. While the study did not specifically assess which type of commitment influenced the effectiveness of the HRIS in LGAs in Tanzania, it underscores the importance of fostering effective employee commitment. Achieving this can be realized through strategies such as recruiting qualified personnel, ensuring fair treatment of employees, building trust, offering competitive compensation and rewards (including salaries and bonuses), promoting work-life balance, facilitating career advancement opportunities and nurturing positive relationships among colleagues and managers (Barus, et al. 2017; Matimbwa & Ochumbo, 2019).

One HRO showed how lack of commitment among employees affects the effectiveness of HRIS. In responding to the question asked on the challenges approvers face when dealing with HRO in LGAs, the HRO said: "…ignorance of the relevant system to follow also findings into unproductiveness on part of the officer since they eventually lack the commitment to a given task."

Conclusions and Recommendations

In conclusion, five variables that were regressed against effectiveness had positive correlation coefficients. Most user characteristics with positive coefficients increase the effectiveness of the HRIS in terms of timeliness, completeness, and accuracy. Three user characteristics with statistically significant influence on the effectiveness of the HRIS are IT skills, commitment and experience. The study concludes that adequate knowledge of the system (IT skills), willingness, and dedication of the employees to work (commitment) and the overall time within which employees use the system (experience) are the three important factors for HRIS effectiveness. Of the three variables, IT skills are acquired through training. Therefore, employers should invest in training employees on HRIS usage to boost the effective use of the system.

Furthermore, user characteristics differ in terms of the level of influence on HRIS effectiveness based on the magnitude of β coefficients. For achieving timely and complete outputs, commitment had higher influence than in the cases with the other two variables. At the same time, the education level and HR knowledge appear to decrease effectiveness on timeliness and completeness of information, respectively. IT skills are the most influential variable in achieving accurate outputs (accuracy) while HR knowledge appears to have the strongest negative influence.

Based on the findings and the conclusions drawn, the following recommendations are made. First, there is a need for LGAs to ensure sustainable

training of HRIS staff on IT and HR skills for enhancing their competencies. Secondly, LGAs need to enhance the commitment of HRIS staff through the recruitment of relevant personnel, and enhance employees' trust by promoting a culture of fairness, transparency and participation. Third, experience sharing and HRIS use should be nurtured. This relationship calls for promoting experience sharing among employees in the LGAs to enhance HRIS use.

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