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Research Paper

Organisational Factors as Determinants of Knowledge Retention among Selected ICT Firms in Nigeria

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ABSTRACT: *Organisational knowledge loss has been a growing concern in the ICT industry in Nigeria, especially due to the exodus of ICT talent to the Western world. Retaining knowledge within the organisation and making it accessible to the right people will enable the organisation to learn from experience and continually improve, rather than reinventing the wheel. This study examines the determinants of knowledge retention at the micro level of organisational factors. Three micro-level factors of higher compensation, organisational culture and management support are considered. The study adopts a quantitative method with a population of 350, a sample size of 187 and a 93% response rate to the questionnaire. The impact of these determinants is tested individually and as a group to establish their respective effect on knowledge retention using correlation and regression analysis. The study established a strong relationship between all three determinants and knowledge retention among professionals in ICT industries. According to the study, higher compensation will encourage knowledge retention within the organisation andreduce the emigration rate, thereby promoting knowledge sharing among professionals. The study also finds that Organisational knowledge is retained where a positive culture exists that supports accessible, open, and transparent leadership and promotes flexible work arrangements. The paper then recommends restructuring the compensation package, adopting a culture of cloud-based knowledge sharing, promoting openness and transparency, implementing a flexible work mode, and aligning individual goals with organisational objectives to enhance knowledge retention among professionals in the ICT industry.*

KEYWORDS: *Cloud-based knowledge, knowledge retention, determinants, knowledge management, knowledge loss*

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I.INTRODUCTION

Knowledge represents a critical resource that an organisation must leverage to gain a competitive advantage in today's global and fast-changing business environments (Ahmed, Salloum, & Shaalan, 2021). Knowledge is defined as an intellectual asset that employees and organisations rely upon to carry out specified organisational functions, tasks & duties (Al-Tit, Al-Ayed, Alhammadi, Hunitie, Alsarayreh, &Albassam, 2022). It is also considered an asset that can be aggregated and transferred at the organisation level from one generation to another (Pellegrini, Ciampi, Marzi, & Orlando, 2020).

Different authors have identified the role of effective knowledge management as the key to developing superior innovation abilities that make it possible for organisations to differentiate themselves in the competitive landscape (Rahimli, 2012; Ngah, & Wong, 2020; Ahmed *et al.,*2021). Knowledge management (KM) refers to processes employed by organisations to manage their intellectual capital. Three phases involved in Knowledge management include knowledge creation, knowledge retention, and knowledge reuse (Levallet, & Chan, 2019;

Edwards, & Lönnqvist, 2023). Creation speaks to developing an organisational knowledge base, while retention, which is our focus in this paper, speaks to acquiring, storing, and retrieving knowledge, aiming to increase knowledge reuse (Ensslin, Carneiro Mussi, Rolim Ensslin, Dutra, & Pereira Bez Fontana, 2020).Knowledge Management (KM) is not novel in organisations (Barnes, 2022). There also exist many KM methodologies, both in academic research and in business situations (Raudeliuniene, Albats, &Kordab, 2021; Daghfous, Amer, Belkhodja, Angell, &Zoubi, 2023).

Knowledge retention, on the other hand, is not fully covered in both academic research and published business case studies (Ensslin *et al.,* 2020). Knowledge retention is also called knowledge continuity, focuses on challenges such as quick aids, which are required to package employees' immediate knowledge for transference to others in the organization (Mashele, 2023). Most classic KM solutions focus on an enduring structured environment that encourages people to share their ongoing knowledge rather than creating an environment that retains knowledge (Obrenovic, Jianguo, Tsoy, Obrenovic, Khan, & Anwar, 2020). For knowledge retention, the goal is to ensure that an expert's most valuable knowledge becomes an organisational asset in a limited period (Levallet, & Chan, 2019).

Since knowledge is resident in individuals, retaining knowledge in an organisation is, to a large extent, a function of retaining the individuals with such knowledge (Al-Kurdi, El-Haddadeh, &Eldabi, 2020). Hence, a situation of high turnover of ICT experts can only result in knowledge loss by the organization (Serenko, 2023). By implication, all the factors that could enhance the retention of such experts will also lead to knowledge retention either by ensuring they remain in the organisation with their knowledge or motivating them to share such knowledge should they have to expatriate.

Empirical and theoretical findings (Foss, & Pedersen, 2019; Muhammed, & Zaim, 2020) acknowledge the importance of knowledge management to firms but fail to consider the determinants of knowledge retention of professionals in ICT firms. Therefore, it is apt for this article to investigate the organisational factors determining knowledge retention among professionals in selected ICT firms in Nigeria when most of the brightest ICT professionals are leaving the country with their vast knowledge.

II.OVERVIEW OF THE NIGERIAN ICT INDUSTRY

The ICT sector is knowledge-intensive and rapidly evolving, relying heavily on skilled human capital for software development, network engineering, data analysis, and other specialised roles (Eskindarov, Gruzina, Firsova, & Melnichuk, 2020; Cheshmehzangi, 2022). In recent years, Nigerian ICT firms have faced high turnover and "brain drain" as skilled professionals are highly marketable and often enticed by global opportunities or competitive local startups (Agbai, & Okechukwu, 2024).

Nigeria's ICT industry is one of the largest in Africa and a significant contributor to the economy (around 10% of GDP) (David & Grobler, 2020), and it spans several key subsectors that drive the country's digital transformation. The sector comprises telecommunications, the core information technology of software & IT services, fintech, e-commerce, cybersecurity, digital media, and emerging technologies. Nigeria is widely regarded as Africa's largest ICT market, with a huge base of consumers and users (Soetan, Mogaji, & Nguyen, 2021). Over half of Nigeria's 220+ million people now have access to mobile phones, and internet usage has surged – Nigeria alone accounts for roughly 29% of all internet usage in Africa (Irielle, 2024). As of mid-2022, there were around 85 million broadband subscriptions (44% penetration) in the country, and total internet users (including mobile internet on any network) are well over 100 million and growing (Godlovitch, Martins, Gries, Knips, & Wernick, 2023). In the early 2000s, telecom and IT contributed under 1% to Nigeria's GDP. Still, by 2022, the ICT sector accounted for 18.44% of GDP in Q2 2022– a dramatic increase that surpassed the contribution of oil in that quarter (Osanebi, & Odeke, 2025). In terms of market value, the Nigerian ICT sector is a multi-billion-dollar industry (Hildyard, 2023), and estimates indicate the market size will reach about $32.8 billion by 2025 and continue growing at double-digit rates (projected to more than double to $76 billion by 2030).

For Nigerian ICT firms, the strategic importance of knowledge retention is even more pronounced, given the sector's role in economic development and global competition. Every time a skilled programmer or network engineer leaves without knowledge handover, the firm risks project delays or loss of client trust (Beecham, Clear, Lal, & Noll, 2021). However, firms protect their business continuity by retaining key personnel or at least their critical knowledge (through documentation and knowledge-sharing before departure) (Dimma, 2020). Over time, organisations that build a reputation for valuing and retaining knowledge attract top talent, creating a virtuous cycle that further enhances their human capital (Sitorus, &Hendratmoko, 2024). This ultimately supports sustainability – companies can maintain performance even as individual employees cycle in and out because the collective organisational knowledge endures (Kim, & Park, 2020).

Despite impressive progress and opportunities, Nigeria's ICT industry faces challenges that constrain its full potential (Agbeyangi, Makinde, & Odun-Ayo, 2024). One major issue is infrastructural: an unreliable power supply and inadequate supporting infrastructure increase operating costs (Lebepe, & Mathaba, 2024).

Security challenges in rural areas, multiple taxation, policy shifts or government intervention are among the industry's challenges. Another growing challenge is cybersecurity and fraud. With more Nigerians online and using digital services, cyber threats have increased – it's estimated that Nigerian businesses and financial institutions lose around $500 million annually to cybercrime (Kalu, Chidi-Kalu, Okidi, &Usiedo, 2020). Lastly, the industry grapples with a skills gap and brain drain (Gains, 2024). While Nigeria produces many graduates, there is a shortage of highly skilled ICT professionals (many skilled tech workers emigrate or are hired abroad), which can limit local capacity (Adhikari, Clemens, Dempster, & Ekeator, 2021). All these challenges must be addressed to sustain the sector's growth and take advantage of the potential. This, among others, is what necessitates this study.

III.THE RATIONALE OF THE STUDY

Nigeria's Information and Communication Technology (ICT) sector has recently been bedevilled with the emigration of skilled professionals, commonly known as the brain drain syndrome (Nnoruga, &Osigwe, 2023). This has resulted in an enormous loss of knowledge in the sector as most emigrated professionals' knowledge and skills have not been domesticated within the organisation where they previously worked. According to (Rufai, Ogunniyi, Salman, Salawu, & Omotayo, 2021), these movements of skilled labour from Nigeria to greener pastures can have significant implications for economic development, particularly in emerging markets like Nigeria.

The knowledge retention crisis described above manifests in several ways, affecting various sectors of the economy. This crisis has manifested in low productivity and efficiency, skill shortages that are difficult to replace, the sector's inability to innovate and expand, and increased reliance on foreign expertise, resulting in higher operational costs and slower response time to technological issues within the tech industry. All these are posing a significant barrier to the country's digital transformation efforts and have further exacerbated the country's low innovation and technological development.

The dynamics of knowledge retention within the ICT sector are complex and multifaceted, influenced by a culture that encourages collaboration, openness, and a commitment to learning (Mohiuddin, Matei, Al-Azad, & Su, 2022; Van Thi, 2024). These cultures will be greatly hindered when the push factors that encourage talent expatriation are present in an organisation. The absence of such culture in many ICT organisations in Nigeria leads to the challenge of tech knowledge being siloed or lost when a professional leaves the organisation. However, the presence of these cultures and practices in the organisation is not sufficient for knowledge sharing by staff as the same push factors that determine their expatriation decision also encourage knowledge hoarding that inhibits knowledge retention.

Organisational factors such as employee compensation, organisational culture, and management support that determine talent expatriation are, by extension, the determinants of knowledge retention (Allen, & Vardaman, 2021). These factors will encourage the professionals to stay and retain their knowledge in the organisation. Their presence in the organisation will also encourage knowledge-sharing, resulting in knowledge retention.

It is obvious that a better compensation package reduces staff turnover and encourages knowledge-sharing and, hence, knowledge retention. However, it is necessary to ascertain to what extent this factor determines knowledge retention.

Access to quality education is another factor that encourages knowledge sharing, as documented in many literatures (Iqbal, 2021). The extent to which this factor determines knowledge retention needs to be empirically determined.

The presence or absence of a positive organisational culture that encourages learning, openness and collaboration has been documented in literature as a factor that encourages knowledge retention; the extent to which this factor alone determines knowledge retention still needs to be investigated and reported. Management support and leadership style can encourage staff to stay and enhance organisational knowledge retention. A positive leadership style that provides a level playing field for staff and honours its obligation and commitment to staff reduces talent expatriation. Yet, the extent of this still needs to be empirically determined.

IV.LITERATURE REVIEW

In recent years, the migration patterns of ICT professionals from Nigeria have become increasingly prominent, driven by a complex interplay of push and pull factors (Ogbanga, 2024). Existing literature highlights that factors such as economic opportunities, professional development, socio-political stability, and personal aspirations play crucial roles in influencing the migration decisions of skilled workers (Mihăilă, 2019; Kwilinski, Lyulyov, Pimonenko, Dzwigol, Abazov, &Pudryk, 2022). Retaining employee knowledge is not just an HR concern, it is a strategic imperative for organisational performance and long-term sustainability (Mujtaba, & Mubarik, 2022). In today's knowledge-driven economy, many firms recognise that knowledge has become

perhaps the most important resource, even more critical than physical assets or financial capital, for achieving a competitive advantage (Stehr, Adolf, & Mast, 2020).

This article is anchored on Human Capital Theory (HCT), which posits that employees' knowledge, skills, experience, and education constitute an intangible form of capital that adds economic value to an organisation (Tonini, 2021). Originating from the works of economists like Gary Becker and Theodore Schultz in the 1960s, HCT treats expenditures on training and education as investments in human capital that enhance productivity. In essence, individuals increase their productive capacity through learning and skill development, and organisations benefit by having a more competent, innovative workforce. The theory provides a basis for explaining the relationship between the organisational factor determinants of employee compensation, organisational culture and management support and knowledge retention, which is our focus in this article.

V.HUMAN CAPITAL THEORY

Human Capital Theory (HCT) suggests that individuals strategically invest in their education, skills, and health to enhance productivity and earnings (Abdou, 2023). The theory highlights the pursuit of better returns on personal investments in skills and education as a driver for migration (Adetayo, (2024). In essence, individuals increase their productive capacity through learning and skill development, and organisations benefit by having a more competent, innovative workforce. A key implication of HCT is that labour is not homogeneous; workers with higher levels of expertise or education are more valuable and command higher compensation in competitive markets (Constant, 2020). For example, firms have an incentive to seek and cultivate "high human capital" employees (those with scarce skills or specialised knowledge) because these employees can drive greater performance (Daunfeldt, Halvarsson, Gustavsson Tingvall, & McKelvie, 2021).

The Human Capital Theory can be extended to knowledge retention because it also recognises that human capital is portable (Marginson, 2019). Unlike physical assets, human capital resides in employees and remains their property, so if an employee leaves, their accumulated knowledge and skills leave with them. This portability implies that organisations risk losing valuable knowledge if they do not retain the people. As a result, HCT suggests organisations should support and incentivise their most valuable employees to prevent turnover. Therefore, the core principle of HCT is that investing in people's development yields returns in performance, but such investments must be protected by practices that retain those people (and their knowledge) within the firm (Akpieyi, 2024).

From the standpoint of HCT, knowledge retained in the firm is part of its human capital stock. Hence, the theory provides a useful lens for understanding why knowledge retention is strategically important. If employees' knowledge is a form of capital, then losing critical employees (or failing to capture their know-how) is a loss of capital investment for the organisation (Durst, Edvardsson, & Foli, 2023). By implication, therefore, HCT demands that firms should actively manage and protect their knowledge assets just as they would their physical assets. This means creating conditions that encourage employees to stay and share their expertise, embedding knowledge in organisational memory. This becomes more instructive when we consider that investments in specific human capital, such as training employees in firm-specific processes or developing an internal knowledge base, will only yield the highest returns when the employee remains with the organisation. If such an employee leaves, the firm not only loses talent but also forfeits the investment in their training and accumulated experience. Thus, HCT underscores a direct link between investing in people and the need for knowledge retention: to reap long-term returns from human capital investments, organisations must retain that human capital. This is why many companies implement knowledge management and retention practices (e.g. mentorship programs, documentation, succession planning) – these efforts help preserve institutional knowledge so that it continues to benefit the firm even if individuals eventually depart.

Moreover, HCT highlights that organisations should value and reward their employees' knowledge, treating it as a strategic resource. Managers and leaders are more likely to create policies that facilitate knowledge sharing and retention when they view employee know-how as an asset. In short, Human Capital Theory provides a rationale for knowledge retention initiatives: they protect and leverage the organisation's investment in human capital by ensuring that crucial knowledge remains within the company and continues to enhance performance over time. HCT also view compensation as more than an expense but a part of the return on an employee's human capital and a signal of how much the organisation values their knowledge. Relatively high or competitive compensation is often required to attract and retain individuals with highly valued skills and knowledge.

From the HCT standpoint, equitable and adequate compensation rewards employees' investment in developing their expertise, thus encouraging them to "invest" that human capital in the firm rather than taking it elsewhere. Thus, fair and attractive compensation packages significantly enhance employee retention by improving loyalty and reducing turnover. In other words, when employees feel they are compensated in line with their skills and contributions, they are more likely to stay, which means the organisation retains their knowledge and experience. HCT also encourages organisations to design compensation systems to encourage knowledge-sharing behaviours. For instance, reward structures (bonuses, incentives, recognition) can be tied to

knowledge transfer activities, such as mentoring juniors or documenting best practices, thereby embedding knowledge retention into the compensation philosophy. According to (Kim, & Park, 2020), organisations that implement reward and compensation systems for knowledge sharing are explicitly investing in the retention of knowledge as a strategic asset.

A positive organisational culture that prioritises learning, collaboration, and knowledge sharing will essentially nurture the development and preservation of human capital (Akdere, & Egan, 2020). In HCT terms, such a culture amplifies the returns on human capital investments by creating an environment where employees continuously grow and willingly share what they know. Such a positive organisational culture promotes knowledge sharing and retention, fostering employee trust and collaboration. When the culture encourages openness and recognises employees for contributing knowledge, individuals are more inclined to document their insights, teach others, and build long-term careers in the organisation. This directly combats knowledge loss – employees in a supportive culture feel less temptation to leave (taking their expertise with them) because they feel valued and see opportunities to apply and increase their human capital internally. Conversely, a culture that lacks trust, transparency, or learning opportunities can only lead to knowledge hoarding, high turnover, and the erosion of organisational memory. If employees perceive that sharing knowledge might threaten their job security or that the organisation does not value their contributions, they may become disengaged or leave for better environments. Human Capital Theory suggests that organisational culture should reinforce the notion that employee knowledge is a collective asset, not just an individual's property. Many successful ICT firms embed knowledge-sharing into their core values – for example, by celebrating team problem-solving, maintaining wikis or knowledge bases, and encouraging senior experts to mentor juniors. Indeed, a "knowledge-sharing culture" is often cited as a critical success factor for effective knowledge-retention strategies.

Management support is another pivotal factor in retaining knowledge, as leaders set the tone and allocate resources for human capital development (Ganapathy, 2019). HCT implies that if executives view employees as assets, they will be willing to invest in their training, provide tools for knowledge capture, and implement policies that favour retention. Management support in the context of knowledge retention means senior leaders actively participate in and endorse knowledge retention activities, acting as role models and ensuring the necessary conditions (time, budget, infrastructure) are in place. When leadership is committed to preserving institutional knowledge, initiatives like mentorship programs, knowledge repositories, and succession planning receive priority. This strong backing signals to employees that their know-how is valued at the highest levels, which can increase their organisational commitment.

On the other hand, lack of management support is often cited as a major barrier to effective knowledge management (Bansal, Panchal, Jabeen, Mangla, & Singh, 2023). Without management's encouragement, employees may not take knowledge retention practices seriously (for example, if managers do not themselves document lessons learned or fail to reward team members who share knowledge) (Mashele, 2023). Human Capital Theory would view this as a failure to safeguard the firm's human capital investments. In practice, Nigerian ICT firms that enjoy robust management support for employee development tend to implement more structured knowledge retention measures – such as regular training (upskilling technical staff), creating expert panels or communities of practice, and establishing knowledge transfer requirements when someone exits a role (Zayed, Edeh, Islam, Nitsenko, Dubovyk, &Doroshuk, 2022). By providing additional resources when necessary and integrating knowledge goals with business strategy (e.g., making knowledge retention a KPI for managers), leaders help institutionalise retention of know-how as part of the corporate strategy (Phaladi, 2021).

Empirical evidence and case studies further underscore the benefits of strong knowledge retention. According to (Hatcher, 2024), companies that implement robust knowledge retention programs (such as formal knowledge management systems, mentorship, and succession plans) have been shown to achieve significantly higher employee productivity rates – one survey reported a 40% higher productivity in companies prioritising knowledge retention compared to those that do not.

VI.OBJECTIVES AND HYPOTHESIS

The study strives to achieve the following objectives:

i. Identify if employee compensation significantly defines knowledge retention among selected ICT firms in Nigeria.
ii. Establish how strongly organisational culture determines knowledge retention among selected ICT firms in Nigeria.
iii. Establish how strongly management support determines knowledge retention among selected ICT firms in Nigeria.
iv. Determine how strongly organisational factors determine knowledge retention among selected ICT firms in Nigeria.

The study examined various determinants of knowledge retention through empirical research. To achieve the above objectives, the following hypotheses were drawn:

Ho_1: Higher employee compensation does not significantly affect knowledge retention among selected ICT firms in Nigeria.
Ho_2: Organisational culture does not significantly affect knowledge retention among selected ICT firms in Nigeria.
Ho_3: Management support does not significantly affect knowledge retention among selected ICT firms in Nigeria.
Ho_4: Organizational Factors (higher compensation, organisational culture, management support) do not significantly affect knowledge retention among selected ICT firms in Nigeria.

VII.METHODOLOGY

The study uses a quantitative approach. A set of questionnaires was administered among the ICT experts in the selected ICT firms in Nigeria. The target population for this study comprises ICT professionals currently working in selected ICT firms in Nigeria. Five ICT firms with branches across Nigeria are used for the study. The sample comprises individuals from the selected core ICT firms with a specialisation in system integration (hardware, software, network, and security integration), based on the NITDA classification, and a total population of 350 staff.
Given the population structure, a stratified random sampling technique is employed to ensure representation from different sub-sectors and organisational sizes. This method enhances the generalizability of the findings by capturing the perspectives of a diverse group of ICT professionals (Barragán-Landy, Sousa, Romero, & Leão, 2020).
The questionnaire was shared with the 350 staff members of the selected company, and 174 responses were obtained. Using the Taro Yamane formula, the ideal sample size is expected to be 187, as shown in the calculation below. The response of 174, therefore, amounts to a 93% response rate.
n = N/(1+N(e)2 where: n= sample size, N= Population size and e= margin of error.
Hence, for the study, below is our ideal sample size:
N= 350, e= 0.05 Sample size (n) = 350/1+350(0.05)2 n = 187

Three standardised questionnaires were employed to measure the relationship between the organisational factors and knowledge retention. Data is collected through an online survey platform. Participants receive email invitations with a study overview, confidentiality assurances, and a survey link. The survey is open for ten days, with reminders to encourage participation. This method allows data collection from a widely dispersed population, improving reach and efficiency.
The gathered data is analysed using statistical software to summarise demographic characteristics and survey responses. Inferential statistics, including correlation and multiple regression analysis, are employed to examine the relationships between variables (Mertler, Vannatta, &LaVenia, 2021).

VIII.FINDINGS AND DISCUSSIONS

The questionnaire was analysed in two parts. The first is the demographic analysis of the respondents. The second is the analysis of thefour (4) research hypotheses formulated for the study using correlation and regression analysis.

Table 1.1: Demographic Profile of Respondents

Variable	Response Label	Frequency	Percentage
Gender	Male	96	55.2
	Female	78	44.8
	Total	**174**	**100**
Age	Below 21 years	24	13.8
	21-29 years	56	32.2
	30-39 years	49	28.2
	40-49 years	28	16.1
	Above 50 years	17	9.8
	Total	**174**	**100**
Marital status	Single	64	36.8
	Married	85	48.9
	Divorced	25	14.4
	Total	**174**	**100**
Educational qualification	HND/Bsc/BA	61	35.1
	Msc/MBA	79	45.4
	OND/NCE	34	19.5

	Total	**174**	**100**
Length of service	1-5 years	36	20.7
	6-10 years	59	33.9
	11-15 years	52	29.9
	16 years and above	27	15.5
	Total	**174**	**100**
Staff level	Management	31	17.8
	Senior staff	68	39.1
	Junior staff	75	43.1
	Total	**174**	**100**
Average monthly salary	Less than 500k	64	36.8
	Between 500k-1m	56	32.2
	Between 1m-2m	37	21.3
	Between 2m-4m	12	6.9
	Above 5m	5	2.9
	Total	**174**	**100**
Work location	Lagos	61	35.1
	Abuja	58	33.3
	Port Harcourt	55	31.6
	Total	**174**	**100**
Specialization	Hardware	21	12.1
	Software	79	45.4
	Network	42	24.1
	Security	32	18.4
	Total	**174**	**100**
Propensity to share my knowledge with my colleague	Very high	37	21.3
	High	55	31.6
	Low	51	29.3
	Very low	31	17.8
	Total	**174**	**100**
ICT skill level	Beginner	31	17.8
	Intermediate	49	28.2
	Expert	52	29.9
	Expert & multi skilled	42	24.1
	Total	**174**	**100**

Source: Field Survey, 2024.

The study employed multiple linear regression analysis to test hypotheses at a 5% significance level, aiming to establish the relationship between organisational factors and knowledge retention among selected ICT firms in Nigeria.

The study's decision rule states that if the probability value calculated is greater than the critical level of significance, i.e. 0.00>0.05, then the null hypothesis is accepted, and the alternative hypothesis is rejected. However, if the probability value is less than the critical value, i.e., 0.00<0.05, the null hypothesis is rejected, and the alternative is accepted.

Ho_1: Higher employee compensation does not significantly affect knowledge retention among selected ICT firms in Nigeria.

Table 2.1: Regression Analysis of Higher Compensation Levels and Knowledge Retention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.525	.522	.4509

a. Predictors: (Constant), Higher Compensation Levels

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.641	1	38.641	190.034	.000[b]
	Residual	34.974	172	.203		
	Total	73.615	173			

a. Dependent Variable: Knowledge Retention
b. Predictors: (Constant), Higher Compensation Levels

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.364	.219		6.219	.000
	Higher Compensation Levels	.607	.051	.725	13.785	.000

a. Dependent Variable: Knowledge Retention

Source: Field Survey, 2024.

The linear regression was employed at a 5% significance level to analyse the hypothesis. The analysis showed a significant model summary: $F_{(1,2)} = 190.034$, $P < 0.05$, R = 0 .725, $R^2 = 0.525$. The analysis showed that highercompensation levels have a significant positive effect on knowledge Retention among ICT professionals in Nigeria. With an R-squared of 0.525 and an adjusted R-squared of 0.522, the model in this regression analysis shows statistical significance ($p < 0.05$). The regression analysis model that is being presented fits the data well and accounts for approximately 52.5% of the variance in knowledge Retention, and the remaining 47.5% is due to other factors that are not captured in the regression equation. Also, the p-value of (0.000), which is less than the level of significant at the 0.05 level (2-tailed) indicate that the result is statistically significant; therefore, the null hypothesis is rejected and it can be concluded that higher compensation levels have significant effect on knowledge Retention among selected ICT firms in Nigeria.

The analysis showed a significant model summary: F (1,2) = 190.034, P < 0.05, R = 0 .725, R2 = 0.525, confirming that higher compensation levels have a significant positive effect on knowledge retention among ICT professionals in Nigeria. The p-value of (0.000) indicates a statistical significance; therefore, the null hypothesis is rejected, and it can be concluded that higher compensation levels have a significant effect on knowledge retention among ICT professionals in Nigeria.

Ho_2: Organisational culture does not significantly affect knowledge retention among selected ICT firms in Nigeria.

Table 2.2: Regression Analysis of Organisational Culture and Knowledge Retention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701[a]	.491	.489	.4665

a. Predictors: (Constant), Organisational culture

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.180	1	36.180	166.231	.000[b]
	Residual	37.435	172	.218		
	Total	73.615	173			

a. Dependent Variable: Knowledge Retention
b. Predictors: (Constant), Organisational culture

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.374	.234		5.881	.000
	Organisational culture	.747	.053	.701	12.893	.000

a. Dependent Variable: Knowledge Retention

Source: Field Survey 2024

To analyse the hypothesis, the linear regression was employed at a 5% significance level. The analysis showed a significant model summary: $F_{(1,2)} = 166.231$, $P < 0.05$, R = 0 .701, $R^2 = 0.491$. The correlation coefficient equals 0.701, indicating a strong relationship between Organisational culture and knowledge Retention among selected ICT firms in Nigeria. The model in this regression analysis also showed a statistical significance ($p < 0.05$). The regression analysis model that is being presented fits the data well and accounts for approximately 49.1% of the variance in knowledge Retention, and the remaining 50.9% is due to other factors that are not captured in the

regression equation. Also, the p-value of (0.000), which is less than the level of significance at the 0.05 level (2-tailed), indicates that the result is statistically significant; therefore, the null hypothesis is rejected, and it can be concluded that Organisational culture has a significant effect on knowledge Retention among selected ICT firms in Nigeria.

The analysis showed a significant model summary: $F_{(1,2)} = 166.231$, $P < 0.05$, R = 0.701, $R^2 = 0.491$, indicating a strong relationship between organisational culture and knowledge retention among ICT professionals in Nigeria. The p-value of (0.000) 2-tailed indicates statistical significance; therefore, the null hypothesis is rejected, and it can be concluded that Organisational culture has a significant effect on knowledge retention among ICT professionals in Nigeria.

Ho_3: Management support does not significantly affect knowledge retention among selected ICT firms in Nigeria.

Table 2.3: Regression Analysis of Management Support and Knowledge Retention

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.598[a]	.358	.354	.5243

a. Predictors: (Constant), Management support

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.327	1	26.327	95.761	.000[b]
	Residual	47.288	172	.275		
	Total	73.615	173			

a. Dependent Variable: Knowledge Retention
b. Predictors: (Constant), Management support

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.884	.225		7.385	.000
	Management support	.581	.059	.598	9.786	.000

a. Dependent Variable: Knowledge Retention

Source: Field Survey 2024

The linear regression was employed at a 5% significance level to analyse the hypothesis. The analysis showed a significant model summary: $F_{(1,2)} = 95.761$, $P < 0.05$, R = 0 .598, $R^2 = 0.358$. The analysis showed that Management support hasa significant positive effect on knowledge Retention among selected ICT firms in Nigeria. With an R-squared of 0.358 and an adjusted R-squared of 0.354, the model in this regression analysis shows statistical significance ($p < 0.05$). The regression analysis model that is being presented fits the data well and accounts for approximately 35.8% of the variance in knowledge Retention,and the remaining 64.2% is due to other factors that are not captured in the regression equation. Also, the p-value of (0.000), which is less than the level of significance at the 0.05 level (2-tailed), indicates that the result is statistically significant; therefore, the null hypothesis is rejected, and it can be concluded that Management support hasa significant effect on knowledge Retention among selected ICT firms in Nigeria.

The analysis showed a significant model summary: $F_{(1,2)} = 95.761$, $P < 0.05$, R = 0 .598, $R^2 = 0.358$, indicating a strong relationship between Management support and knowledge retention among ICT professionals in Nigeria. The p-value of (0.000) 2-tailed indicates statistical significance; therefore, the null hypothesis is rejected, and it can be concluded that Management support significantly affects knowledge Retention among ICT professionals in Nigeria.

Ho_4: Organisational Factors (higher compensation, organisational culture, management support) do not significantly affect knowledge retention among selected ICT firms in Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.601[a]	.361	.350	.5261

a. Predictors: (Constant), Compensation, Organizational Culture, Management Support

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.562	3	8.854	31.989	.000[b]
	Residual	47.053	170	.277		
	Total	73.615	173			

a. Dependent Variable: Knowledge Retention
b. Predictors: (Constant), Compensation, Organizational Culture, Management Support

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.195	.330		3.615	.00
	Compensation	.267	.062	.277	4.279	.00
	Organizational Culture	.298	.082	.312	3.646	.00
	Management Support	.173	.082	.178	2.120	.03

a. Dependent Variable: Knowledge Retention

Source: Field Survey 2024

Table 2.4: Organisational Factors and Knowledge Retention

To analyse the hypothesis, the multiple linear regression was employed at 5% significance level. The analysis showed a significant model summary: $F_{(1,2)} = 31.989$, $P < 0.05$, R = 0 .601, $R^2 = 0.361$. The analysis showed that organizational factors (Compensation, Organizational Culture, Management Support) have significant positive joint effect on knowledge Retention. With an R-squared of 0.601 and an adjusted R-squared of 0.350, the model in this regression analysis shows statistical significance ($p < 0.05$). The multiple regression analysis model that is being presented fits the data well and accounts for approximately 36.1% of the variance in knowledge Retention, and the remaining 63.9% is due to other factors that are not captured in the multiple regression equation. The combined effect of the predictor variables on knowledge Retention is significant, as shown by the overall F-statistic of 31.989 and the significant p-value (0.000). According to their corresponding coefficients, t-statistics, and p-values, compensation, organisational culture, and management support are significant predictors. Therefore, the null hypothesis is rejected, and it can be concluded that organisational factors (Compensation, Organisational Culture, Management Support) have a significant effect on knowledge Retention among ICT professionals in Nigeria.

The analysis showed a significant model summary: $F_{(1,2)} = 31.989$, $P < 0.05$, R = 0 .601, $R^2 = 0.361$, indicating that organisational factors (Compensation, Organisational Culture, Management Support) have a significant positive joint effect on knowledge retention. The combined effect of the predictor variables on knowledge retention is significant, as shown by the overall F-statistic of 31.989 and the significant p-value (0.000). Therefore, the null hypothesis is rejected, and it can be concluded that organisational factors (Compensation, Organisational Culture, Management Support) significantly affect knowledge Retention among ICT professionals in Nigeria.

IX.CONCLUSION

Organisations, especially those in the ICT sector, are becoming vulnerable due to the increasing rate of knowledge loss. This situation is occasioned by layoffs, retirements, staff turnover, mergers, and acquisitions and is now exacerbated by the brain drain syndrome, which is fast becoming a national crisis. Hence, this article has analysed some micro-level determinants of knowledge retention to ascertain their impacts on knowledge retention.

Three organisational factors (Compensation, Organisational Culture, and Management Support) are considered in this study and how they impact knowledge retention. Findings from the study confirm that higher compensation levels and organisational culture have a significant positive effect on knowledge retention among ICT professionals in Nigeria, as corroborated by Grabara (2013). Management support has also been confirmed

to have a significant positive effect on knowledge Retention among ICT professionals in Nigeria, corroborating the findings of (Baron and Kenny, 2016).

The study recommends that ICT firms restructure their compensation packages to retain professionals with their knowledge and/or encourage them to share their knowledge with their colleagues.

Another recommendation from the study is to implement a culture of cloud-based knowledge, where professionals' knowledge is accessible anywhere in the world, to guarantee access to the knowledge base of emigrated professionals. A culture of openness and transparency, a flexible work mode, and alignment of individual goals with organisational goals to encourage professionals to stay in the organisation with their knowledge or at least share with their colleagues is also recommended.

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