Knowledge Management and Employee Performance in the Information Technology Sector

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Abstract

Background: Knowledge management involves the identification, gathering, and organization of both explicit knowledge, such as documents and procedures, and tacit knowledge, including the skills and experience of individuals within an organization Information technology is a knowledge-intensive industry, so knowledge management is crucial for employee performance.

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Objectives: The objective of this study is to examine the status of knowledge management practices within the IT sector, specifically knowledge creation, sharing, retention, and actionable knowledge support, and their influence on employee performance.

Methods: This adopts a descriptive and explanatory research design. Purposively, it considered 310 employees working in IT companies in Nepal; 303 responses were considered for analysis. A questionnaire survey measured knowledge management with 27 items and employee (task) performance with six items. The study adopted PLS-SEM to analyze the data.

Results: This study found that actionable knowledge support, knowledge sharing, and knowledge retention emerged as the primary influencers of employee performance within the IT sector. Specifically, active involvement in knowledge-sharing and retention contributes to employee performance. Among the factors, actionable knowledge support is vital for employee performance. However, a relationship between knowledge creation and performance was not found.

Conclusion: This study helps improve our understanding of IT knowledge management dynamics in developing countries like Nepal, based on knowledge creation, sharing, retention, and actionable knowledge support. Future research on knowledge dynamics and performance may build on these findings. The knowledge-intensive nature of the IT sector affects employee performance. These findings could lay the groundwork for future research on knowledge dynamics and performance and performance in this industry.

Keywords: Employee performance, IT sector, knowledge management, Nepal, performance

JEL Classification: I23, I29, M50



Knowledge is the most valuable strategic resource for knowledge-intensive organizations in a knowledgebased economy, and managing it well provides them with a competitive edge. An organization's competitive advantage and success depend on employee performance in dynamic and competitive business environments (Islam, Sultana, & Rahman, 2023), which demonstrates goal achievement (Febrian et al., 2023). As well as being motivated and engaged (Sitorus, Lumbanraja, & Sinulingga, 2022), honest, high-performing employees help organizations achieve goals (Abireza & Faris, 2022). Due to their adaptability, employees are considered the most vital capital in achieving organizational goals (Hidayat et al., 2022). Conversely, negative employee performance reduces productivity, profitability, and organizational efficiency; which demands identification of various factors influencing performance (López-Cabarcos et al., 2022).

In the contemporary business landscape, improving organizational performance is not only dependent on utilizing tangible assets and natural resources but also on managing knowledge effectively (Mills & Smith, 2011). Knowledge management involves the identification, gathering, and organization of both explicit knowledge, such as documents and procedures, and tacit knowledge, including the skills and experience of individuals within an organization (Cooper, 2014). It includes producing, validating, presenting, disseminating, and using organizational knowledge (Bhatt, 2001).

Studies have suggested that effective knowledge management significantly impacts employee performance (Tuffaha, 2020; Alijanzadeh, Razavi, & Limuni, 2020; Sinaga et al., 2020) by enhancing information accessibility and facilitating informed decision-making. Mahendher et al. (2020) argue that effective knowledge management increases organizational productivity and employee performance, especially in competitive information technology (IT) companies. Knowledge-intensive businesses like IT companies rely heavily on knowledge and its application for operation (Madhushani & Mudalige, 2020). However, knowledge becomes valuable only when applied consistently and correctly (Biswakarma, 2018). Therefore, effective knowledge management enables businesses to maintain competitive advantage (Madhushani & Mudalige, 2020).

Since companies generate and apply knowledge, the IT industry is knowledge-intensive (Toivonen, 2004). The IT industry in Nepal is growing rapidly (Paudel, Agal, & Kumar, 2021), making knowledge management more important for employees. IT industry knowledge workers must manage and maintain knowledge to facilitate the use of technology advances (Mantow & Nilasari, 2022). Despite the importance of knowledge management on job performance (Alijanzadeh, Razavi, & Limuni, 2020), the extent to which it is implemented and its impact on IT employees' job performance need to be studied, in the perspective of a developing nation, featured with limited knowledge transfer and advancement. The use and effectiveness of KM tools and approaches in Nepali IT businesses in increasing employee performance are unknown. Despite the growing importance of knowledge management (KM) approaches worldwide, Nepali IT research is few. KM literature generally ignores Nepal's specific difficulties and prospects, focusing on developed economies or larger emerging markets. There is few research on how Nepali IT enterprises' cultural and organizational setting affects KM practices and employee performance. Nepal's distinct socio-cultural climate may affect organization knowledge sharing and use.

Knowledge management is associated with improving employee performance and, consequently, organizational performance. It posits that knowledge management leads to enhanced performance and



contributes to overall competitive advantages and performance of the company. The objective of this study is to examine the existing status of knowledge management practices within the IT sector in Nepal, specifically concentrating on knowledge creation, sharing, retention, and actionable knowledge support and its influence on employee performance. The findings will provide insights into knowledge management practices for enhancing task performance, addressing the existing research gap in the literature regarding knowledge management in developing nations like Nepal.

Review of Literature

Theories underpinning

This study is supported by Nonaka and Takeuchi's knowledge spiral model, the four-factor knowledge management model, the Resource-based view (RBV), and the Knowledge-based view (KBV). According to the Resource-Based View (RBV), a firm's strategic resources are the key factors that determine its ability to obtain a competitive advantage. KBV's primary objective is to ensure that the acquisition and application of knowledge result in exceptional performance.

The Nonaka and Takeuchi knowledge spiral model: An individual's participation in the Socialization– Externalization–Combination–Internalization (SECI) conversion processes, determine knowledge management behavior (Razi et al., 2018). The SECI model is widely used to design and implement knowledge management activities (Bandera et al., 2017). The approach categorizes knowledge conversion into four types: socialization, externalization, combination, and internalization. Socialization entails the transformation of knowledge from implicit to implicit. Externalization is the process of converting tacit knowledge into explicit knowledge. Combination entails the transformation of explicit knowledge into tacit knowledge. The process of merging explicit knowledge into more extensive and organized repositories of knowledge is referred to as combination (Nonaka, Toyama, & Konno, 2000). Internalization refers to the process of converting explicit knowledge into tacit knowledge.

Four-factor model of knowledge management: This paradigm suggests a seamless and dynamic process that involves sharing, creating, and retaining knowledge, all assisted by practical support for knowledge. The processes of knowledge generation, sharing, and retention are interconnected and mutually affect each other. Sharing knowledge within a team is essential as it enables team members to merge their knowledge and expertise in order to generate novel knowledge (Singh & Gupta, 2014). The recently obtained knowledge and efficient methods are then disseminated across team members through knowledge retention and actionable knowledge support (Singh & Gupta, 2014).

Resource-based view (RBV): RBV of the firm proposed by Barney (1991) as a framework for leveraging strategic assets to achieve sustainable competitive advantage. According to Barney (1991), a firm's resources consist of tangible and intangible resources. RBV theory regards firms as having the potential to create valuable capabilities. The organization's key competencies involve considering the firm's assets and resources from a knowledge-based perspective. The firm's competitive advantages are built gradually over time and are not easily replicated by others (Halawi, Aronson, & McCarthy, 2005). Competitive advantages can be obtained by utilizing knowledge management systems effectively (Halawi, Aronson, & McCarthy, 2005; Barney, 1991). Efficiently acquiring and utilizing distinctive and useful knowledge can enhance employee work performance and add to the company's long-lasting



competitive edge. The theory posits that strategic resources play a more vital role in determining an organization's success compared to the influence of individual variables.

Knowledge-based view (KBV): KBV states knowledge is a valuable resource within firms and a means of achieving long-term competitive advantage, eventually improving employee performance (Jardon, 2018). The primary purpose of a firm is the creation and utilization of knowledge (Bierly & Chakrabarti, 1996). Grant (1996) states that the resource-based view (RBV) views knowledge as an intangible asset that gives an organization a competitive advantage. Knowledge is essential to an organization's ability to use and integrate various sources of knowledge and turn them into meaningful outputs (Holsapple & Wu, 2008). The theory recognizes information knowledge as a strategic resource and explores how firms can effectively utilize knowledge-based resources to achieve superior performance (Keh, Nguyen, & Ng, 2007).

The Triarchy model of employee performance: According to this model, employee performance includes behavior and work outcomes. The behavior aspect involves employees' job duties, while the outcome aspect involves their consequences. According to Pradhan and Jena (2017), the Triarchy model of employee performance consists of three dimensions. They are task performance, contextual performance, and adaptive performance. Task performance includes job behaviors related to job descriptions, which require cognitive abilities, task knowledge, and task skills. Contextual performance includes voluntary activities beyond job requirements that contribute to the organization. Finally, adaptive performance refers to an individual's ability to adjust to dynamic work situations.

Knowledge management

Knowledge management is the process through which knowledge and information are generated, shared, utilized, and stored. It enhances organizational performance by fostering increased efficiency, productivity, quality, and innovation. It facilitates better decision-making, minimizes rework, and promotes greater collaboration (Oludare et al., 2023). For organizations to thrive in a competitive market, they must implement adaptive strategies, like effective knowledge management processes and best practices (Davenport & Prusak, 1998).

Employee performance

Knowledge-worker performance measures how effectively employees carry out their assigned tasks within the work environment. It assesses how well they perform their job responsibilities regarding the knowledge and skills required for their role (Mustapa & Mahmood, 2016). The knowledge worker's performance on the job should be measured based on their activities rather than their outcomes.

Relationship of knowledge management and employee performance

Knowledge creation and employee performance: Knowledge generation involves the knowledge acquired and developed within an organization, including activities to enhance corporate knowledge (Davenport & Prusak, 1998). This concept, overlapping with knowledge creation, absorption, and adoption (Singh & Gupta, 2014), has been interchangeably used with knowledge creation by researchers like (Zapata Cantú et al., 2009). Sulistyo and Ayuni (2018) operationalized knowledge absorption in the context of linking knowledge absorption and employee performance. Cui (2020) and Rahmayanto, Hakim, and Rommy (2019) explored the concept of knowledge capture in its connection to knowledge



management and employee performance. Studies like Masa'deh et al. (2017), Akram and Hilman (2018), Alyoubi et al. (2018), Biswakarma (2018), Cui (2020), El-Chaarani and El-Abiad (2020) have studied knowledge creation in the context of linking it to employee performance, in their respective country context.

The research conducted by Akram and Hilman (2018) and Alijanzadeh, Razavi, and Limuni (2020) indicates a direct correlation between knowledge creation and employee performance. Alyoubi et al. (2018) research indicates a negative relationship with job satisfaction, while Biswakarma (2018) found a positive moderate relationship with knowledge acquisition and job performance. Cui (2020) reported a positive correlation between knowledge creation, capture, and employee performance. Likewise, El-Chaarani and El-Abiad (2020) observed a significant positive impact on job performance, and Zargar and Rezaee (2013) identified a significant relationship between knowledge detection, creation, and performance. Gouri and Kermas (2022) found a positive relationship between knowledge application and individual performance, while Zargar and Rezaee (2013) reported a significant relationship between knowledge development and employee performance, gaps persist in the Nepali IT sector. Most studies are conducted in diverse cultural and organizational settings, which may not accurately reflect Nepal's unique situation. The focus is on knowledge processes, but a more integrated approach is needed to analyze their impact on employee performance. Comparative studies of cross-country or inter-industry variances are scarce, which could reveal best practices and areas for improvement in the Nepali IT sector.

H1: Knowledge creation has a significant effect on employee performance.

Knowledge sharing and employee performance: Knowledge transfer involves sharing knowledge from one person or group to another. This exchange of information can occur among individuals or groups both within and throughout the organization (Zapata Cantú et al., 2009). Alijanzadeh, Razavi, and Limuni (2020) and Biswakarma (2018), knowledge exchange was operationalized to link knowledge management and employee performance. Studies such as Ahmad, Malik, and Anwar (2018), Akram and Hilman (2018), Alyoubi et al. (2018), Cui (2020), El-Chaarani and El-Abiad (2020), Gouri and Kermas (2022), Indra Setia et al. (2022), Mantow and Nilasari (2022), and Rahmayanto, Hakim, and Rommy (2019) have operationalized knowledge sharing in the context of linking knowledge management and employee performance.

In their study, Wang et al. (2018) examined 36 Chinese knowledge-based organizations and found a positive relationship between knowledge transfer and team performance. Ahmad, Malik, and Anwar (2018) found that more significant contributions of tacit knowledge sharing positively impact employee performance. Previous research conducted by Akram and Hilman (2018) suggested that knowledge sharing established a significant relationship with employee performance in Pakistani banks. Additionally, Alyoubi et al. (2018) suggested that knowledge sharing significantly affects employee performance through job satisfaction in Saudi Arabian libraries. Cui (2020) identified a positive correlation between knowledge sharing and enrichment, contributing to employee performance. El-Chaarani and El-Abiad (2020) concluded that knowledge sharing positively impacts job performance in the Lebanese banking sector.

Rahmayanto, Hakim, and Rommy (2019) highlighted the influence of knowledge sharing on employee

performance in their study. However, Gouri and Kermas (2022), found no statistical significance between knowledge sharing and individual performance. Many studies focus on China, Pakistan, Saudi Arabia, and Lebanon, but few address Nepal's distinct cultural, economic, and organizational setting. Knowledge sharing's impact on Nepali IT employees' performance is unknown. Second, knowledge sharing improves employee performance in some studies, although Gouri and Kermas (2022) found no statistical significance. This contradiction encourages further detailed research to determine when knowledge sharing improves performance. Thirdly, often research fails to distinguish between tacit and explicit knowledge and their effects on employee performance.

H2: Knowledge sharing has a significant effect on employee performance.

Knowledge retention and employee performance: Knowledge retention pertains to the collection of knowledge that an organization owns, encompassing many types such as tacit knowledge gained by individuals and groups of people (Alavi & Leidner, 2001). Alyoubi et al. (2018) and El-Chaarani and El-Abiad (2020) operationalized knowledge retention by linking knowledge management and employee performance. Alijanzadeh, Razavi, and Limuni (2020), Biswakarma (2018), and Mantow and Nilasari (2022), knowledge storage is operationalized in the context of linking knowledge management and employee performance. Previous studies like Alyoubi et al. (2018) in Saudi Arabian libraries found that knowledge retention has significant relationship on employee performance mediated by job satisfaction.

In the same way, El-Chaarani and El-Abiad (2020) found that the ability to retain knowledge has a beneficial effect on job performance within the Lebanese banking industry. Alijanzadeh, Razavi, and Limuni (2020) discovered a substantial correlation between knowledge retention and job performance, but Biswakarma (2018) indicated the absence of any association between knowledge retention and employee job performance. Nepali IT has gaps despite substantial evidence linking knowledge retention and employee success. Generalizations are problematic since Nepali IT companies' knowledge retention and personnel effectiveness are unknown. Research ties information retention to employee performance, although results vary.

Biswakarma (2018) found no association, however Alyoubi et al. (2018) and El-Chaarani and El-Abiad (2020) found benefits. This paradox shows further research is needed to determine if information retention improves performance. Third, studies rarely separate tacit and explicit knowledge retention and its effects on job satisfaction, innovation, and production. Few studies compare knowledge retention across industries in the same country, which could reveal sector-specific best practices. Finally, longitudinal studies on the long-term impacts of information retention on employee performance are limited, limiting our understanding of how sustained knowledge retention tactics affect performance. These constraints may explain how knowledge retention affects Nepali IT personnel performance.

H3: Knowledge retention has a significant effect on employee performance.

Actionable knowledge support and employee performance: Actionable knowledge support is how



employees learn about one other while working on projects and addressing difficulties (Singh & Gupta, 2014). Olaisen and Revang (2018) examined how to make tacit information explicit and actionable. The study conducted by Olaisen and Revang (2018) reveals that actionable knowledge influences team performance. Implementing the socialization process leads to high-performing teams and increased efficiency in knowledge-intensive firms. Most research, like Olaisen and Revang (2018), focuses on transforming tacit knowledge into explicit and practical forms in cultural and organizational contexts that may not fit Nepal's unique environment.

Knowledge-based studies of Nepali IT company employee performance are lacking. Second, actionable knowledge support boosts team performance and efficiency in knowledge-intensive firms, but how is unknown. Actionable information (task-specific vs. generic organizational knowledge) and performance measures must also be studied. Organizational culture and leadership enable actionable knowledge support and performance, but research ignores them. Rare comparative research across Nepalese sectors could uncover sector-specific best practices and challenges. Finally, few longitudinal studies have examined the long-term effects of actionable knowledge help on employee performance, limiting our understanding of how sustained practices affect outcomes. These deficiencies could help explain how actionable knowledge support affects Nepali IT staff performance.

H4: Actionable knowledge support has a significant effect on employee performance.

The framework of the study is based on four theories/Model: Nonaka and Takeuchi's (1995) SECI model, the four-factor model of knowledge management proposed by Singh and Gupta (2014), the resource-based view (RBV) and the knowledge-based view (KBV). According to Singh and Gupta (2014), the four-factor model provides a complete framework to explore the relationship between knowledge management and other variables, i.e., knowledge creation (KC), knowledge sharing (KS), knowledge retention (KR), actionable knowledge support (AKS), and their relationship with employee performance (EP).

Materials and Methods

Design and sample: This study adopted a combination of descriptive and explanatory research design, as the study describes the status of the knowledge management practices and their effect on employee performance. The target population for the study was employees working in IT companies in Nepal. Unfortunately, there is a lack of systematic information on IT services companies (Paudel, Agal, & Kumar, 2021). Purposive sampling was used to identify target population samples. IT workers who were willing to take the survey provided responses. In addition, snowball sampling was used to expand the sample size, by taking references from the covered samples. That is the respondents willing to participate in the sampling were asked to refer other employees working in the IT sector in Nepal. The sample minimum sample is determined with Gpower 3.9, as 438 samples with four predictors. A total of 310 samples were collected, out of this only 303 respondents were included in the final analysis,

considering its completeness. The respondents' profile is presented in Table 1.

Table 1

Variable	Category	Frequency	Percentage
	Male	198	65.3
Gender	Female	101	33.3
	Prefer not to say	4	1.3
	Below 20 years	1	.3
A go Group	20-30	254	83.8
Age Group	30-40	45	14.9
	Above 40 years	3	1
	Intermediate	4	1.3
Education	Bachelors	203	67
Education	Masters	94	31
	Doctorate	2	.7
	Less than 1 year	31	10.2
	1-3 years	132	43.6
Work Experience	4-6 years	84	27.7
	7-9 years	39	12.9
	10 years and above	17	5.6

Demographic Characteristics of the Respondents

Instrumentation: The four-factor model of knowledge management was measured with 27 questions from Singh and Gupta (2014). The four dimensions of this model include knowledge creation, knowledge sharing, knowledge retention, and actionable knowledge support. This paradigm includes knowledge generation, sharing, retention, and actionable knowledge support. Nine items were used to assess knowledge creation, 8 for knowledge sharing, 5 for knowledge retention, and 5 for actionable knowledge support. The items utilized in the research study were validated specifically within the Indian IT sector to ensure their reliability and validity. The study employed 9 items to evaluate knowledge creation, 8 items for knowledge sharing, 5 items for knowledge retention, and 5 items for actionable knowledge support. These items were validated within the context of the Indian IT sector to guarantee their reliability and validity. Six items were drawn from the task performance dimension of the Triarchy model of employee performance developed by Pradhan and Jena (2017).

A preliminary study reviewed the research questionnaire's usability. IT company employees were given a questionnaire to review and provide feedback on improving it. A pretest assessed question writing, comprehension, and consistency. The questionnaire was revised based on academic and employee feedback. Based on feedback, three items assessing knowledge management replaced 'superiors' and 'experts' with 'mentors/ superiors' and 'experts/ seniors. The questionnaire was distributed using Google Form, email and personal meetings with the respondents. The responses were collected with an average of three reminders to the respondents. All items were measured on a 5-point Likert scale.

Multivariate normality, common method bias: The multivariate normality test was done with Mardia's univariate and multivariate test. The multivariate normality was not achieved. Mardia's



multivariate skewness and kurtosis show Skewness=209.00 (p=0.001) and Kurtosis 1289.96 (p=0.001) in the threshold of +-3 skewness and +-2 (Kline, 2016) is not normal data. Mardia's coefficient is significant (critical ratio > 1.96), the data is not normally distributed. As this study adopts a cross-sectional approach, as a procedural measure, participants were asked not to engage in discussions about the survey with their peers while completing the forms. Kock (2015), the full collinearity test was done with a common dummy variable (Gender), the VIF is lesser than 3.3 (Diamantopoulos & Siguaw, 2006), KC (1.033), KS (1.195), KR (1.129), AKS (1.099), and EP (1.004).

Data analysis technique: The study employed both descriptive (Mean, SD, frequency, and percentage) and PLS-SEM was utilized for testing the hypotheses. The measurement model assessment for the reflective constructs involved evaluating convergent and divergent validity as well as reliability. This was followed by the structural model assessment, which included path analysis, R², f², and Multigroup analysis. For hypothesis testing, bootstrapping with 10,000 subsamples and percentile bootstrap at 95% CI was undertaken. Data analysis was conducted using SmartPLS 4.0.9.9v and SPSS 29v. The PLS-SEM technique was chosen due to the non-normal distribution of the data.

Result and Discussion

Measurement model assessment

The item indicator loading, internal consistency reliability, convergent and discriminant validity (Hair et al. 2022) were measured for the construct. The item loadings below 0.5 (Hair et al., 2022) of the constructs were deleted. To achieve the threshold for AVE of minimum 0.5, the construct KC item 3, 4, 5 and KS items 4 and 5 were dropped. Internal consistency reliability, measured through Cronbach's Alpha, rho a & c, and Composite Reliability were within the threshold of 0.70 (Hair et al., 2022). The result of the reliability, convergent validity and VIF is placed in table 2 Subsequently, the Fornell-Larcker criterion (Fornell & Larcker, 1981) and HTMT were achieved by the thresholds, the HTMT0.85 (Henseler et al., 2015). The F&L criteria and HTMT is placed in table 3 & 4. In addition, the cross-loading is placed in the annex.

Table 2

Variables	Items	Loading	СА	CR (rho_a)	CR (rho_c)	AVE	VIF
	KC1	0.745		0.793	0.850	0.532	1.700
	KC2	0.766	-				1.602
Knowledge Creation (KC)	KC6	0.698	0.783				1.606
	KC7	0.688					1.657
	KC8	0.748					1.669

Reliability, Convergent validity and VIF

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	KS1	0.711					2.378
	KS2	0.813					1.655
Knowledge	KS3	0.737	0.000	0.925	0.960	0.509	1.582
Sharing (KS)	KS6	0.676	0.808	0.025	0.860	0.508	1.551
	KS7	0.643	-				1.854
	KS8	0.684					1.929
	KR1	0.850					2.082
	KR2	0.807		0.848	0.871	0.579	2.122
Knowledge Retention (KR)	KR3	0.848	0.814				1.346
	KR4	0.681					1.417
	KR5	0.579					1.407
	AK1	0.768		0.818		0.571	2.607
Actionable	AK2	0.710			0.869		2.324
Support	AK3	0.755	0.813				1.966
(AKS)	AK4	0.767					1.399
	AK5	0.774					1.318
	EP1	0.850					1.699
	EP2	0.701					2.404
Employee Performance	EP3	0.751	0.956	0.974	0.002	0.592	1.965
(EP)	EP4	0.694	0.850	0.8/4	0.893	0.382	1.506
	EP5	0.784					1.493
	EP6	0.786					1.341

Discriminant validity- Fornell-Larcker criteria

	KC	KS	KR	AKS	EP
KC	0.730				
KS	0.288	0.713			
KR	0.206	0.383	0.761		
AKS	0.256	0.340	0.236	0.755	
EP	0.206	0.311	0.273	0.325	0.763

Discriminant validity - HTMT criterion

Variables	KC	KS	KR	AKS	EP
KC					
KS	0.367				
KS	[0.230, 0521]				
KD	0.250	0.471			
	[0.148, 0.401]	[0.350, 0.589]			
AVS	0.320	0.408	0.296		
AKS	[0.165, 0.507]	[0.265, 0.571]	[0.177, 0.430]		
ED	0.235	0.344	0.308	0.378	
EP	[0.137, 0.373]	[0.222,0.488]	[0.193, 0.434]	[0.267, 0.503]	

Descriptive Analysis

Status of knowledge management practices and employee performance within the IT sector in Nepal

Knowledge creation practices in the IT sector have been implemented moderately (M=3.94, SD=0.847). Overall, the team's attitudes and behaviors toward knowledge creation are positive. Similarly, knowledge sharing has been moderately (M=3.93, SD=0.853) practiced in IT sector. Overall, the findings indicate that the team is moving in the right direction when it comes to knowledge sharing. The part of knowledge retention in IT sector has been employed moderately (M=3.67, SD=0.946) successfully. The team has a moderate level of knowledge retention overall. Overall, the actionable knowledge support construct (M=4.24, SD=0.691) indicates that the team has generally positive attitudes toward actionable knowledge support, and IT sector have implemented actionable knowledge support sound. Furthermore, high-performing employees work in IT firms (M=4.18, SD=0.771), and the construct of employee performance has generally demonstrated positive attitudes toward their work performance. Table 5 presents the descriptive analysis.

Correlational analysis

Furthermore, the correlation analysis shows compelling insights into the relationship between different facets of knowledge management and employee performance. The analysis demonstrates that all variables—KC, KS, KR, and AKS—exhibit statistically significant positive correlations with EP at a significance level of p < 0.01, that is the KC (r=0.206, t=4.013, p<0.01), KS (r=0.311, t=5.785, p<0.01), KR (r=0.273, t=5.065, p<0.01), and AKS (r=0.325, t=6.779, p<0.01) has significant positive relationship to EP. These findings strongly suggest a meaningful and positive association between effective knowledge management practices and enhanced employee performance within the context studied. Table 5 presents the correlational analysis.

Variables	Mean	SD	EP Correlation (r, t value, p)
KC	3.94	0.847	0.206 (4.013, 0.001)
KS	3.93	0.853	0.311 (5.785, 0.001)
KR	3.67	0.946	0.273 (5.065, 0.001)
AKS	4.24	0.691	0.325 (6.779, 0.001)
EP	4.18	0.771	1

Descriptive and correlation analysis

Structural model assessment – Path analysis

The study analyzed path coefficients to evaluate the impact of various facets of knowledge management on employee performance, using bootstrapping techniques with 10,000 subsamples, percentile bootstrap, and a 95% confidence interval (Hair et al., 2022). The structural inner VIF was assessed, and the value of VIF was found less than the threshold of 3.3 (Diamantopoulos et al. 2008), showing no collinearity issues. The coefficients of determination (R2) value of 0.175 indicates that the dimensions of knowledge management together explain 17.5% of the variation in the employee performance, which means a weak to moderate effect. According to Ozili (2022), a low R2 value of at least 0.10, i.e., 10%, is generally considered acceptable in social science if most of the explanatory variables are statistically significant. The goodness of fit criterion was investigated by the SRMR, the result shows 0.066 value, within the threshold value of 0.08, and signifies the study's explanatory power (Hensler et al., 2016; Hu Bentler, 1999). Table 7 presents the model predictability and model fit indicators.

Similarly, the individual path coefficients of the dimensions of knowledge management are presented in table 6. The result indicates that the path coefficients for knowledge sharing (β =0.161; t=2.561, p<0.01), knowledge retention (β =0.145; t=2.430, p<0.05), actionable knowledge support (β =0.145; t=2.430, p<0.05) are positively significant. However, the results also indicated that there is no significant causal relationship between knowledge creation and employee performance (β =0.075; t=1.389, p>0.05). Further, *f*² value indicates that AKS has the highest effect (f2=0.048, small to medium effect) among the dimensions – KS (f2=0.024), KR (f2=0.021) and KC (f2=0.006). However, the values are not significant. Table 6 presents the path analysis and f2.

Table 6

Hypothesis testing – path analysis

Path	ß	SD	t value	Р	CI	95%	VIF		f?	Р	CI	95%
1 util	Ч	55	t value	values	2.50%	97.50%	V II,	Decision	12	values	2.50%	97.50%

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KC -> EP	0.075	0.054	1.389	0.165	-0.038	0.172	1.134	Not Supported	0.006	0.592	-0.210	0.031
KS -> EP	0.161	0.063	2.561	0.010	0.033	0.280	1.314	Supported	0.024	0.261	-0.072	0.003
KR -> EP	0.145	0.059	2.430	0.015	0.026	0.258	1.199	Supported	0.021	0.285	-0.101	0.009
AKS -> EP	0.217	0.053	4.091	0.001	0.115	0.322	1.180	Supported	0.048	0.057	0.026	0.026

Summary of model - R^2

Endogenous	dogenous _{P2}		t voluo	Dualuas	CI		
variable	KZ	50	t value	P values	2.50%	97.50%	SRMR
EP	0.175	0.038	4.599	0.001	0.096	0.229	0.066

The study aimed to investigate the impact of knowledge management on employee performance within Nepal's IT sector. The study finding indicates a moderate practice of knowledge creation and the team presents positive attitudes and behaviours towards fostering knowledge creation. The moderate practice of knowledge creation suggests that while there are efforts to foster innovation and generate new ideas, these practices are not yet fully integrated or optimized within the IT sector. Similarly, the knowledge sharing practices are moderate, that indicates a promising direction towards sharing information and knowledge among the IT employees. It indicates that IT employees are open to sharing information and knowledge, but there may be barriers such as lack of formal mechanisms, time constraints, or insufficient technology infrastructure that prevent this practice from being more robust.

In regards of the dimension knowledge retention, the findings of the study indicated a moderate level of success in its practice. There is a positive inclination in the direction of actionable knowledge support. An effort to foster this support in the within IT sector. The findings of the study also indicated a presence of high-performing employees, indicating a generally positive attitude towards their work output and dedication. The findings highlight the industry's dedication to creating a favorable environment for efficient knowledge management and optimizing staff capabilities.

The study revealed a relationship between the aspects of knowledge management—namely, knowledge creation, knowledge sharing, knowledge retention, and actionable knowledge support—and employee performance. The findings highlight a significant and positive correlation between effective knowledge management practices and enhanced employee performance in the context examined, underscoring the vital role that proficient knowledge management plays in promoting and optimizing employee performance in this field.

The study found that knowledge sharing significantly affects employee performance. The finding corroborates the prior investigations like Ahmad, Malik, and Anwar (2018), Akram and Hilman (2018), Alyoubi et al. (2018), Rahmayanto, Hakim, and Rommy (2019), Cui (2020), El-Chaarani and El-Abiad (2020), Gouri and Kermas (2022). The findings of this study are consistent with the theories of resource-based view and knowledge-based view. In the resource-based view perspective, knowledge is considered a strategic resource for organizations. By engaging in knowledge sharing, firms generate a valuable, scarce, and irreplaceable asset that enhances employee performance and confers competitive advantages. According

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to the knowledge-based view perspective, knowledge is the fundamental element of knowledge companies. A culture that encourages the exchange of knowledge fosters social interaction among individuals, leading to enhanced employee performance. Knowledge is seen as a strategic resource that, when shared, creates a valuable, rare, and non-substitutable asset that improves employee performance and provides competitive advantages.

Similarly, knowledge retention significantly affects employee performance. The findings align with the previous studies like Alyoubi et al. (2018), El-Chaarani and El-Abiad (2020). The findings align with the SECI model, resource-based view and knowledge-based view. Tacit knowledge is shared from senior resources to junior resources through socialization. On the other hand, externalization helps capture best practices, and documentation prevents the loss of valuable knowledge required to perform day-to-day activities. As per resource-based view and knowledge-based view, retaining valuable knowledge within an organization enhances intellectual capital, which builds employees' skills and improves performance, leading to a competitive advantage. Tacit knowledge is shared from senior to junior resources through socialization, while externalization helps capture best practices and documentation prevents the loss of valuable knowledge is shared from senior to junior resources through socialization, while externalization helps capture best practices and documentation prevents the loss of valuable knowledge. Retaining valuable knowledge within an organization enhances intellectual capital, building employees' skills and improving performance, leading to a competitive advantage.

Likewise, the findings from this study revealed that actionable knowledge support has significant effect on employee performance. The study's findings support previous studies like Olaisen and Revang (2018) that actionable knowledge improves team performance. The availability of actionable knowledge enables employees of IT companies to find the required information quickly. Employees can get guidance from their seniors while performing the assigned tasks. This finding aligns with the resource-based view and knowledge-based view, mentioning the importance of strategic resources, particularly actionable knowledge, in improving employee performance. The most significant finding of this study is the identification of the direct impact of actionable knowledge support on employee job performance. Actionable knowledge support is the dimension of knowledge management identified by Singh and Gupta (2014). It is among the first studies connecting actionable knowledge support and employee job performance. Therefore, the finding of our study represents a unique contribution.

The study findings indicate moderate practice of knowledge creation, suggesting efforts to foster innovation and generate new ideas are present but not yet fully integrated or optimized within the IT sector. Similarly, knowledge sharing practices are moderate, indicating a promising direction toward sharing information and knowledge among IT employees, although there may be barriers such as lack of formal mechanisms, time constraints, or insufficient technology infrastructure that prevent more robust practice.

Regarding knowledge retention, the findings indicated a moderate level of success, with a positive inclination toward actionable knowledge support. The study highlighted efforts to foster this support within the IT sector. Additionally, the presence of high-performing employees suggests a generally positive attitude towards work output and dedication. These findings highlight the industry's dedication to creating a favorable environment for effective knowledge management and optimizing staff capabilities.

This study found a relationship between the facets of knowledge management-knowledge creation,

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knowledge sharing, knowledge retention, and actionable knowledge support—and employee performance. The findings strongly indicate a significant and favorable correlation between proficient knowledge management practices and amplified employee performance within the specific context examined. This underscores the critical role of effective knowledge management in fostering and optimizing employee performance within this domain. A knowledge-sharing culture promotes socialization among individuals, improving employee performance as knowledge is exchanged and applied within the organization.

Conclusion and Suggestions

In conclusion, this study established that actionable knowledge support, knowledge sharing, and knowledge retention emerged as a critical influencers of employee performance within IT sector. Specifically, active involvement in knowledge-sharing and retention activities directly contributes to enhanced job performance among employees. Among the factors actionable knowledge support is vital for employee performance. Actionable knowledge assistance is crucial for IT employee performance in Nepal, as technology advances rapidly. It helps professionals use new technology, meet international standards, and improve technical skills. Continuous knowledge support helps IT professionals face complex issues, provide best practices, and innovate. However, the study did not establish a direct connection between knowledge creation and performance within this context. This highlights the need for further exploration to understand the complex relationship between knowledge creation and employee performance in the IT sector. By addressing this research gap, the study makes a significant contribution to the understanding of knowledge management dynamics in a developing country context. These insights can provide a foundation for future research aimed at uncovering the complexities of knowledge dynamics and employee performance within this industry. The knowledge-intensive nature of the IT sector emphasizes its unique connection with employee performance, offering valuable perspectives for future studies to deepen into these intricate relationships.

The study's findings offer factual proof that knowledge management is positively correlated with employee performance. Among all the dimensions of knowledge management, actionable knowledge support shows the highest influence on employee job performance. This implies that IT sector companies can improve their employees' performance through improved team cohesion, which involves externalization, i.e., tacit to explicit knowledge conversion. Team cohesion improves the problem-solving and decision-making capabilities of employees through interaction among team members. IT sector companies can focus on improving theoretical knowledge by promoting a learning culture and improving the practical skills of their employees through skill development programs. Moreover, the study suggests that firms might improve employee performance by actively supporting the exchange of knowledge and fostering the retention of knowledge. Implementing effective knowledge management strategies can enhance employee performance, enabling firms to sustain a competitive advantage in a rapidly changing business landscape. In addition, the Nepalese government should promote and support IT enterprises in implementing ongoing learning and skill development initiatives to expand the expertise of its personnel. Government initiatives could include subsidies or tax incentives for companies investing in training and development. Policymakers should advocate for knowledge sharing and retention frameworks, creating guidelines for knowledge management practices and offering recognition for excellence. Partnerships between educational institutions and IT

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companies can ensure a steady flow of knowledge and innovative practices. Collaborative platforms for IT professionals to share best practices and innovative solutions can also be beneficial. Industry-wide knowledge-sharing networks or forums hosted by government bodies can foster collaboration and cohesion.

This study examined knowledge management and employee performance directly. To better understand these associations, future study could examine mediating and moderating characteristics like employee engagement. Additionally, knowledge generation appears to have little impact on employee performance. For a better understanding, future research might examine how corporate culture, and incentive structures affect knowledge generation and employee performance. Finally, studies could examine other knowledge management aspects that affect IT and other service industry employee performance.

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Annexure -I

Cross loading

Items	AKS	EP	KC	KR	KS
AKS1	0.768	0.264	0.203	0.202	0.227
AKS2	0.710	0.191	0.205	0.205	0.203
AKS3	0.755	0.240	0.256	0.184	0.281
AKS4	0.767	0.256	0.166	0.145	0.287
AKS5	0.774	0.265	0.148	0.164	0.280
EP1	0.294	0.850	0.149	0.267	0.309
EP2	0.178	0.701	0.118	0.183	0.175
EP3	0.284	0.751	0.245	0.243	0.276
EP4	0.222	0.694	0.098	0.089	0.207
EP5	0.259	0.784	0.136	0.226	0.226
EP6	0.221	0.786	0.167	0.194	0.194
KC1	0.125	0.112	0.745	0.133	0.166
KC2	0.160	0.143	0.766	0.205	0.229
KC6	0.170	0.155	0.698	0.181	0.240
KC7	0.261	0.126	0.688	0.095	0.246
KC8	0.208	0.191	0.748	0.131	0.174
KR1	0.161	0.227	0.116	0.850	0.346
KR2	0.123	0.201	0.122	0.807	0.253
KR3	0.212	0.262	0.231	0.848	0.303
KR4	0.258	0.187	0.183	0.681	0.330
KR5	0.146	0.132	0.114	0.579	0.217
KS1	0.271	0.191	0.268	0.230	0.711
KS2	0.338	0.261	0.215	0.223	0.813
KS3	0.235	0.201	0.187	0.262	0.737
KS6	0.176	0.191	0.227	0.289	0.676
KS7	0.191	0.132	0.180	0.290	0.643
KS8	0.218	0.290	0.172	0.344	0.684

Annexure – II

Measurement model



Annexure – III

Structural Model

