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ABOUT THE JOURNAL

The Management Review is an open access double-blind peer-reviewed annual research journal published by Research Management Cell (RMC), Central Department of Management (CDM), Far Western University, Nepal. The journal aims to explore the new ideas, trends, and issues specially in the diversified discipline of management such as accounting, finance, banking, insurance, marketing, business economics, business communication, business statistics, management information system, corporate governance, corporate social responsibility, general management, human resource management, operational management, strategic management, project management, organizational behaviour, organizational development, and many more connected with management discipline.

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- xvii. The manuscript should be in all the disciplines relating to management.
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EDITORIAL

It gives us immense pleasure to introduce the first volume of *The Management Review*, a double-blind, peer-reviewed, open-access journal published by the Research Management Cell, Central Department of Management, Far Western University, Nepal. This journal emerges from a pressing need to create a scholarly space for rigorous research and reflection on the rapidly evolving field of management in both local and global contexts. In recent decades, the field of management has undergone profound transformations shaped by globalization, digitalization, socio-political change, and increasing emphasis on sustainability and ethics. Against this setting, *The Management Review* aims to serve as a platform for academic and professional voices that can critically analyze, evaluate, and innovate upon contemporary practices and theories within the diverse subfields of management.

The scope of the journal reflects the expansive and integrative nature of modern management studies. We invite papers across a broad spectrum of disciplines including, but not limited to, accounting, finance, banking, insurance, marketing, business communication, business statistics, business, economics, management information systems, corporate governance, corporate social responsibility, human resource management, strategic and operational management, and project management. These domains are not isolated silos; rather, they intersect and influence each other in ways that demand cross-cutting research and dialogue.

This first volume will be a foundation upon which we aim to build a rigorous, respected, and globally connected research outlet. We remain committed to maintaining high academic standards through a meticulous editorial and peer review process. We warmly invite researchers, scholars, and practitioners to contribute to this collaborative venture. Together, let us foster a research culture that is grounded in ethical inquiry, methodical rigor, and a shared vision of advancing knowledge in management for the betterment of organizations and societies.

We express our heartfelt gratitude to all the faculties, staffs, well-wishers, authors, reviewers, editors, and the advisors for their invaluable contributions and the dedication in upholding the quality and integrity of the journal.

With sincere anticipation and academic solidarity,

Editor-in-Chief

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Analyzing the Key Drivers of FinTech Adoption among Business Students at Pokhara University: A Two-Stage PLS-SEM-ANN Approach

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Abstract

The rapid advancement of financial technology (FinTech) has revolutionized financial services globally, with Nepal experiencing growing adoption driven by digital payment platforms, increasing smartphone penetration, and government initiatives. This study aims to identify the key determinants influencing FinTech adoption among business students at Pokhara University. This study examined FinTech adoption among 320 purposively sampled business students at Pokhara University using a two-stage approach, where PLS-SEM with SmartPLS 3.0 assessed linear relationships, and ANN analysis with SPSS 26 captured nonlinear patterns. The study found that Perceived Ease of Use, Financial Literacy, and Regulatory Awareness & Trust significantly influenced FinTech adoption while Perceived Security & Privacy and Social Influence had no significant impact. The implication of the study is that enhancing user experience, integrating FinTech education into curricula, and strengthening regulatory frameworks are essential for promoting adoption and trust in digital financial services among business students.

Keywords: *FinTech Adoption, Financial Literacy, Regulatory Awareness, Business Students*

Introduction

The rapid advancement of financial technology (FinTech) has transformed the global financial landscape by offering innovative digital solutions that improve convenience, security and efficiency in financial transactions. FinTech includes a wide range of services, such as mobile banking, digital wallets, peer-to-peer lending, robo-advisory platforms, blockchain-based transactions and cryptocurrency trading (Thakor, 2019). These technological advancements have revolutionized the way individuals and businesses interact with financial services, reducing reliance on traditional banking systems and promoting financial inclusion. As the world moves towards a cashless economy, the adoption of FinTech solutions has become an integral aspect of modern

financial behavior (Arner et al., 2019). In Nepal, FinTech adoption is gaining momentum, driven by the rise of digital payment platforms, such as eSewa, Khalti, IME Pay and Fonepay (Tan, 2024). The increasing penetration of smartphones and internet access, coupled with government initiatives promoting digital transactions, has further fueled the growth of FinTech services.

However, despite these advancements, the level of FinTech adoption varies significantly across demographic groups. Business students, who represent the next generation of financial professionals, entrepreneurs and decision makers, play a crucial role in shaping the future of digital financial services (Soviatri, 2024). Their awareness, willingness to adopt and perceptions of FinTech solutions can significantly impact the long-term sustainability and expansion of financial technology in Nepal. Understanding the key determinants that influence FinTech adoption among business students is essential for identifying the drivers and barriers to digital financial transformation. Factors such as perceived ease of use, trust in security, privacy concerns, financial literacy, social influence and regulatory awareness all contribute to shaping individuals' adoption behavior. Although FinTech solutions offer greater accessibility and efficiency, concerns about cybersecurity threats, fraud and data privacy often hinder their widespread acceptance (Zakaria et al., 2024). Additionally, financial literacy levels among students determine their ability to differentiate between reliable and unreliable FinTech services, influencing their confidence in using digital financial tools. This study aims to unveil the key determinants of FinTech adoption among business students at Pokhara University, focusing on BBA and MBA students, who are expected to be future financial leaders and decision-makers. By examining their perceptions, preferences, and concerns regarding FinTech, this study seeks to provide valuable insights into the factors that encourage or inhibit digital financial adoption in Nepal.

Review of Literature

Perceived Ease of Use and FinTech Adoption

Perceived ease of use refers to how effortless and user-friendly the technology is for users. The Technology Acceptance Model (TAM) suggests that if individuals find technology easy to use, they are more likely to adopt it. Several studies (Venkatesh et al., 2016) have highlighted how user-friendly interfaces, simple navigation and seamless transactions influence FinTech adoption. Business students are more inclined to favor FinTech solutions that are simple to use and involve little learning effort, because they

are digital natives and familiar with contemporary technologies (Nangin et al., 2020). As mobile banking and digital payment systems become more prevalent, students' inclination toward these technologies is influenced by how seamlessly they integrate into their daily financial transactions. Features such as biometric authentication, one-tap transactions and automated reminders contribute to the perceived ease of use, further enhancing adoption rates (Singh et al., 2020; Hasan et al., 2024). However, challenges such as complex user interfaces and technical glitches, can hinder widespread acceptance. Based on this review, the first hypothesis is as follows:

H₁: There is significant positive impact of Perceived Ease of Use on FinTech Adoption among business students.

Perceived Security and Privacy and FinTech Adoption

Security concerns remain a major barrier to FinTech adoption (Stewart & Jürjens, 2018). Users are concerned about fraud, data breaches and identity theft, which affect their willingness to use digital financial services (Lim et al., 2019). Research suggests that FinTech platforms offering strong encryption, authentication and transparent security policies are more likely to gain consumer trust (Zhang et al., 2023). Business students, given their exposure to financial concepts and awareness of cybersecurity risks, may be particularly cautious when adopting FinTech solutions. Institutions that implement multi-factor authentication, secure transactions and real-time fraud detection can improve user confidence. In addition, government policies that ensure compliance with cybersecurity standards can encourage adoption. However, disbelief remains because of increasing cases of cyberattacks, which may discourage some students from engaging with FinTech platforms (Srinivas et al., 2019). Based on this review, the second hypothesis is as follows:

H₂: There is significant positive impact of Perceived Security and Privacy on FinTech Adoption among business students.

Financial Literacy and FinTech Adoption

Financial literacy plays a crucial role in adopting FinTech solutions. Yoshino et al. (2020) highlight that individual with higher financial knowledge are more likely to use investment platforms, digital wallets and online banking services. Studies also show that business students with greater exposure to financial concepts tend to exhibit higher

adoption rates of digital financial tools (Morgan & Trinh, 2020). Business students are expected to have a higher level of financial awareness than the general population, making them more capable of leveraging FinTech for budgeting, investment and payments. Digital financial tools such as AI-powered budgeting apps and robo-advisors enable financially literate students to make informed decisions (Prabhakaran & Mynavathi, 2023). However, gaps in financial education or misconceptions about digital finance may limit the full utilization of FinTech services. Based on this review, the third hypothesis is as follows:

H₃: There is significant positive impact of Financial Literacy on FinTech Adoption among business students.

Social Influence and FinTech Adoption

Social influence, including peer recommendations, family encouragement and media exposure, can significantly impact FinTech adoption (Kurniasari et al., 2022). Xie et al. (2021) found that individuals are more likely to use FinTech services if they observe friends, family or influencers using them. The widespread use of social media and peer networks among business students increases the likelihood of FinTech adoption through shared experiences and recommendations. Word-of-mouth marketing, online reviews, and influencer endorsements play vital roles in shaping perceptions (Aggarwal et al., 2023). If students see their peers successfully using digital wallets or investment apps, they may be encouraged to adopt similar solutions. However, the negative experiences shared within social circles, such as failed transactions or hidden charges, can prevent adoption. Based on this review, the fourth hypothesis is as follows:

H₄: There is significant positive impact of Social Influence on FinTech Adoption among business students.

Regulatory Awareness & Trust and FinTech Adoption

Government regulations and institutional trust are critical to FinTech adoption (Balaskas et al., 2024). Consumers are more likely to use FinTech services when they trust that regulatory bodies ensure data protection and financial stability. Business students with higher regulatory awareness may exhibit greater trust in FinTech platforms that comply with legal and regulatory frameworks. FinTech services operate in a highly regulated financial environment with guidelines on anti-money laundering, customer verification

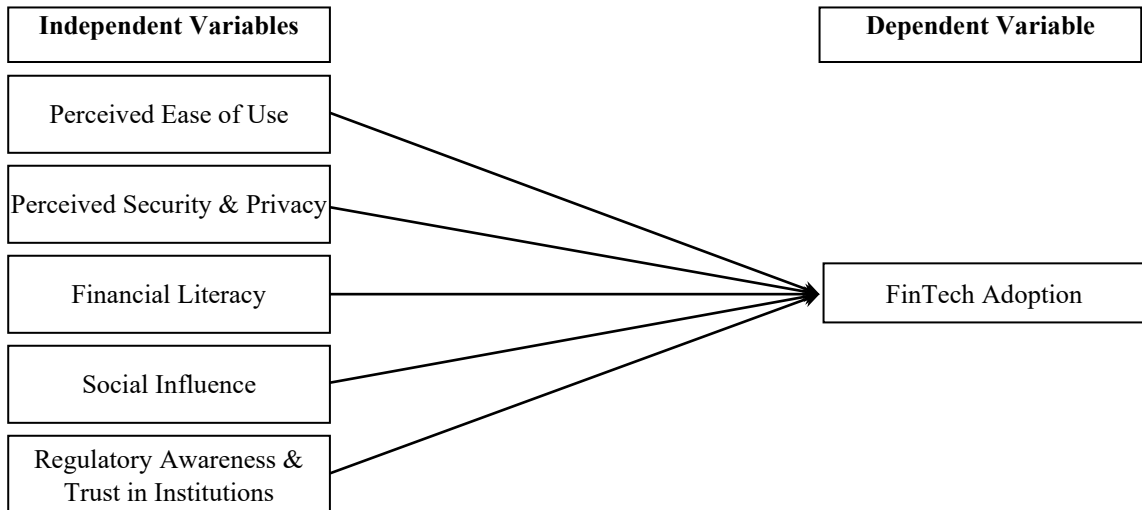
(KYC) and data privacy (Anagnostopoulos, 2018). When students are aware of these regulatory measures, they may be more inclined to adopt FinTech, trusting that their funds and personal information will be protected. However, if they perceive regulatory gaps such as a lack of oversight or ineffective enforcement, trust in FinTech solutions may decline (Khan et al., 2023). Additionally, clear communication of legal protections, such as user compensation in the case of fraud, can improve trust in these services. Based on this review, the fifth hypothesis is as follows:

H₅: There is significant positive impact of Regulatory Awareness and Trust in institutions on FinTech Adoption among business students.

Conceptual Framework

Figure 1

Conceptual framework of key drivers of FinTech Adoption among Business Students



Source: Juliyanti & Prima, 2024; Amnas et al., 2024; Rahim et al., 2023.

Figure 1 presents a conceptual framework highlighting the key drivers of FinTech adoption among business students. It explores factors such as perceived ease of use, perceived security and privacy, financial literacy, social influence, regulatory awareness, and trust, offering insights into their impact on adoption.

Methodology

This study employed a quantitative research design with a descriptive cross-sectional approach to examine the key factors influencing the adoption of FinTech solutions

among business students at Pokhara University. A sample of 320 students from BBA and MBA participated in the study using a purposive sampling technique, as they were expected to be familiar with digital financial services and exposure to financial concepts through their academic curriculum. Data were gathered through a structured questionnaire based on a five-point Likert scale designed to measure various constructs, including perceived ease of use, security concerns, financial literacy, social influence, and regulatory awareness as independent variables, while the adoption of FinTech solutions served as the dependent variable. The Likert scale ranged from 1 to 5, capturing the respondents' levels of agreement with statements related to these variables. The operationalization of these constructs and their corresponding measurement items with their sources are detailed in the appendix.

Several statistical tests were conducted to ensure the reliability and validity of the research instruments. Cronbach's alpha was used to assess the constructs' internal consistency, ensuring that the items measuring each variable were reliable. Additionally, Composite Reliability (CR) and Average Variance Extracted (AVE) were calculated to evaluate convergent validity, while discriminant validity was confirmed using the Fornell-Larcker criterion and Heterotrait-Monotrait Ratio (HTMT). This study employed a two-stage analytical approach, integrating both Partial Least Squares Structural Equation Modeling (PLS-SEM) and Artificial Neural Network (ANN) analysis to enhance the robustness of the findings. First, PLS-SEM was conducted using SmartPLS 3.0, to examine the linear relationships among the constructs, test the hypotheses and assess the significance of the proposed model. In the second stage, ANN analysis was performed using SPSS 26 to capture the complex nonlinear relationships between the independent and dependent variables, offering deeper insights into the factors that drive FinTech adoption.

Ethical considerations were carefully considered throughout the study. Informed consent was obtained from all participants to ensure that they were fully aware of the research objectives, procedures and potential risks associated with participation. Confidentiality was maintained by anonymizing responses and students were assured that their participation was voluntary, with the right to withdraw at any stage without any consequences. These measures ensured the ethical integrity of the study, while safeguarding the rights and privacy of the respondents.

Results and Discussion

Demographic Profile

The demographic profile of the students is presented in Table 1

Table 1

Demographic profile of business students of Pokhara University

Characteristics	Sub categories	Frequency	Percent
Gender	Male	213	66.6
	Female	107	33.4
Age	Below 20	69	21.6
	20 – 24	154	48.1
	25 – 29	88	27.5
	30 and above	9	2.8
Marital Status	Single	204	63.7
	Married	116	36.3
Level of Education	BBA	159	49.7
	MBA	161	50.3
Occupation	Student only	88	27.5
	Part-time employee	78	24.4
	Full-time employee	72	22.5
	Self-employed	82	25.6
Personal bank account	Yes	166	51.9
	No	154	48.1
Types of FinTech services	Digital wallets (eSewa, Khalti, PayPal)	127	39.7
	Mobile banking apps	130	40.6
	Online investment platforms (stocks, mutual funds)	60	18.8
	None	3	0.9
Regulatory FinTech services	Daily	127	39.7
	Weekly	68	21.3
	Monthly	60	18.8
	Occasionally	65	20.3
Purpose for using	Online shopping	69	21.6
	Bill payments & mobile top-ups	75	23.4
	Money transfers	79	24.7
	Investment & trading	97	30.3
Learn about FinTech	Friends and peers	66	20.6
	Social media and influencers	74	23.1
	Advertisements	61	19.1
	Family recommendation	69	21.6
	University courses or workshops	50	15.6
Total		320	100

Table 1 shows the demographic profile of business students at Pokhara University, highlighting key characteristics such as gender, age, education level, occupation and FinTech usage patterns. The majority of respondents were male (66.6%), with the largest age group being 20–24 years (48.1%), followed by 25–29 years (27.5%). Most students were single (63.7%), and the distribution between BBA (49.7%) and MBA (50.3%) students was nearly equal. Regarding employment status, 27.5% were full-time students, while the rest were part-time employees (24.4%), full-time employees (22.5%), or self-employed individuals (25.6%). More than half (51.9%) of the respondents had a personal bank account, while 48.1% did not. In terms of FinTech adoption, digital wallets (39.7%) and mobile banking apps (40.6%) were the most frequently used services, with only 18.8% using online investment platforms and 0.9% not using any FinTech services. The frequency of FinTech usage varied, with 39.7% using these services daily, while others used them weekly (21.3%), monthly (18.8%) or occasionally (20.3%). The primary reasons for using FinTech applications included investment and trading (30.3%), money transfers (24.7%), bill payments (23.4%) and online shopping (21.6%). Awareness of FinTech services was mainly driven by social media and influencers (23.1%), followed by family recommendations (21.6%), friends and peers (20.6%), advertisements (19.1%) and university courses or workshops (15.6%).

Common Method Bias

The study employed Harman's single-factor test, a widely used method for detecting common method bias (CMB), to evaluate potential bias, as both independent and dependent variables were collected using the same survey instrument (Podsakoff et al., 2003). The analysis revealed that a single factor explained only 38.63% of the variance, which is well below the commonly accepted threshold of 50%. According to Podsakoff et al. (2003), the CMB is less likely to be an issue when no single factor accounts for more than half of the total variance. These findings confirm the reliability of the measurement instrument, suggesting that the CMB does not significantly affect the results of this study.

Assessment of Measurement Model

The assessment of the measurement model for the key drivers of FinTech Adoption among Business Students at Pokhara University is given below.

Table 2*Measurement model of the key drivers of FinTech Adoption among Business Students*

Construct	Indicator	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE
Perceived Ease of Use	PEU1	0.916	0.93	0.947	0.781
	PEU2	0.904			
	PEU3	0.875			
	PEU4	0.846			
	PEU5	0.876			
Perceived Security & Privacy	PSP1	0.909	0.951	0.962	0.836
	PSP2	0.910			
	PSP3	0.886			
	PSP4	0.914			
	PSP5	0.951			
Financial Literacy	FL1	0.894	0.941	0.955	0.81
	FL2	0.891			
	FL3	0.870			
	FL4	0.918			
	FL5	0.927			
Social Influence	SI1	0.940	0.959	0.968	0.859
	SI2	0.946			
	SI3	0.917			
	SI4	0.916			
	SI5	0.915			
Regulatory Awareness & Trust	RAT1	0.895	0.94	0.954	0.806
	RAT2	0.906			
	RAT3	0.891			
	RAT4	0.893			
	RAT5	0.902			
FinTech Adoption	FA1	0.926	0.958	0.968	0.856
	FA2	0.938			
	FA3	0.924			
	FA4	0.917			
	FA5	0.922			

Table 2 presents the measurement model used to identify the key drivers influencing FinTech adoption among business students at Pokhara University. The model consists of six constructs: Perceived Ease of Use, Perceived Security & Privacy, Financial Literacy, Social Influence, Regulatory Awareness & Trust in Institutions and FinTech Adoption. Each construct was measured using multiple indicators with factor loadings ranging from 0.846 to 0.951, demonstrating strong individual item reliability. Cronbach's alpha values range from 0.93 to 0.959, confirming high internal consistency, while Composite Reliability scores (0.947 to 0.968) further validate the robustness of

the constructs. The Average Variance Extracted (AVE) values exceed the recommended threshold of 0.50, ranging from 0.781 to 0.859, ensuring adequate convergent validity (Hair et al., 2017). These findings indicate that the model effectively captures the constructs' underlying dimensions, making it a reliable framework for analyzing the factors that drive FinTech adoption among university students. The high reliability and validity scores suggest that the selected constructs and their respective indicators provide a strong foundation for further statistical analysis and hypothesis testing.

Table 3

Fornell Larcker Criteria

Construct	FL	FA	PEU	PSP	RAT	SI
FL	0.800					
FA	0.738	0.825				
PEU	0.730	0.731	0.884			
PSP	0.732	0.733	0.731	0.814		
RAT	0.714	0.735	0.707	0.733	0.878	
SI	0.735	0.734	0.716	0.732	0.740	0.827

Table 4

HTMT Criteria

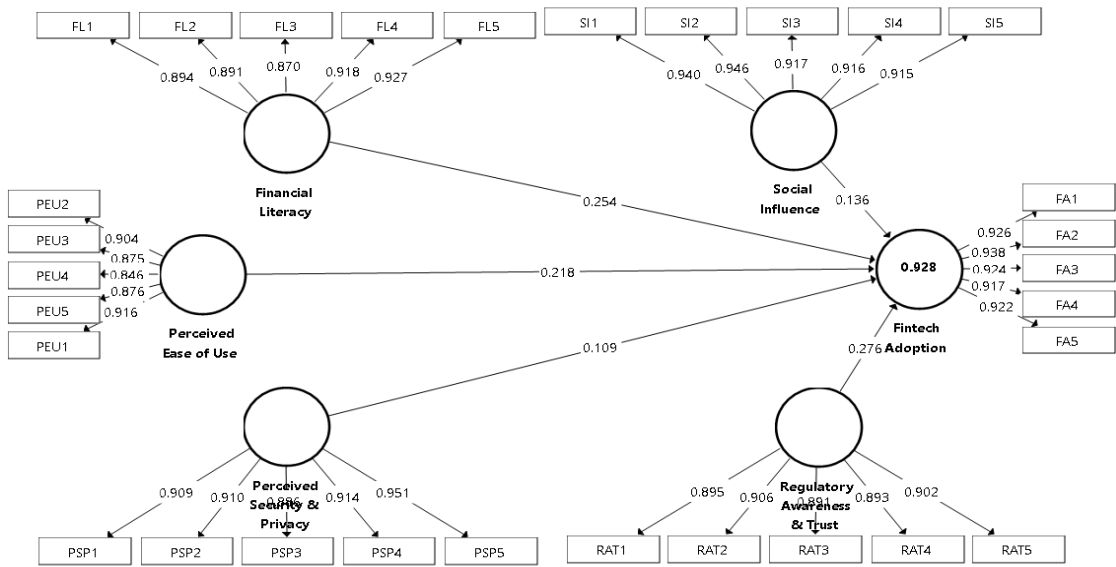
Construct	FL	FA	PEU	PSP	RAT	SI
FL						
FA	0.786					
PEU	0.773	0.785				
PSP	0.784	0.775	0.788			
RAT	0.772	0.785	0.771	0.786		
SI	0.784	0.773	0.767	0.774	0.77	

Tables 3 and 4 present the results of two key validity assessments, the Fornell-Larcker Criterion and Heterotrait-Monotrait (HTMT) ratio, used to evaluate the discriminant validity of the measurement model. Table 3 shows the Fornell-Larcker Criterion, where the diagonal values represent the square root of the Average Variance Extracted (AVE) for each construct, while the off-diagonal values indicate the correlations between constructs. As the diagonal values are higher than the inter-construct correlations, the model satisfies the Fornell-Larcker criterion, confirming that each construct is distinct from the others. Table 4 presents the HTMT ratio, with all values remaining below the

recommended threshold of 0.90, indicating that discriminant validity is upheld (Hair et al., 2017).The consistent results across both tables validate that the constructs in the study are well-defined and do not exhibit significant overlap, strengthening the reliability of the measurement model in examining FinTech adoption among business students at Pokhara University. A diagrammatic representation of the measurement model is shown in the figure below:

Figure 2

Measurement model of the key drivers of FinTech Adoption among Business Students



Assessment of Structural Model

The assessment of structural model for the key drivers of FinTech Adoption among Business Students at Pokhara University is presented below.

Table 5

Structural Model of the key drivers of FinTech Adoption among Business Students

Hypothesis	Path	Beta Coefficient	T Statistics	P Values	Remark
H1	PEU -> FA	0.218	2.734	0.006	Significant
H2	PSP -> FA	0.109	1.225	0.221	Insignificant
H3	FL -> FA	0.254	2.921	0.004	Significant
H4	SI -> FA	0.136	1.267	0.205	Insignificant
H5	RAT -> FA	0.276	3.781	0	Significant

Table 5 presents the hypothesis results of the structural model, highlighting the strength and significance of the relationships between constructs, assessed through bootstrapping with 5,000 samples. The results show that Perceived Ease of Use ($\beta = 0.218$, $p = 0.006$), Financial Literacy ($\beta = 0.254$, $p = 0.004$), and Regulatory Awareness & Trust ($\beta = 0.276$, $p < 0.001$) exhibited significant positive effects on FinTech adoption, suggesting that students were more likely to adopt FinTech when they perceived it as easy to use, had higher financial literacy, and trusted regulatory frameworks. In contrast, Perceived Security & Privacy ($\beta = 0.109$, $p = 0.221$) and Social Influence ($\beta = 0.136$, $p = 0.205$) were found to be insignificant, indicating that concerns about security and privacy, as well as social influence, do not play a major role in FinTech adoption among these students. These findings suggest that policymakers and FinTech developers should focus on enhancing usability, financial education and regulatory trust to drive greater adoption among university students.

Table 6

Predictive Relevance and VIF

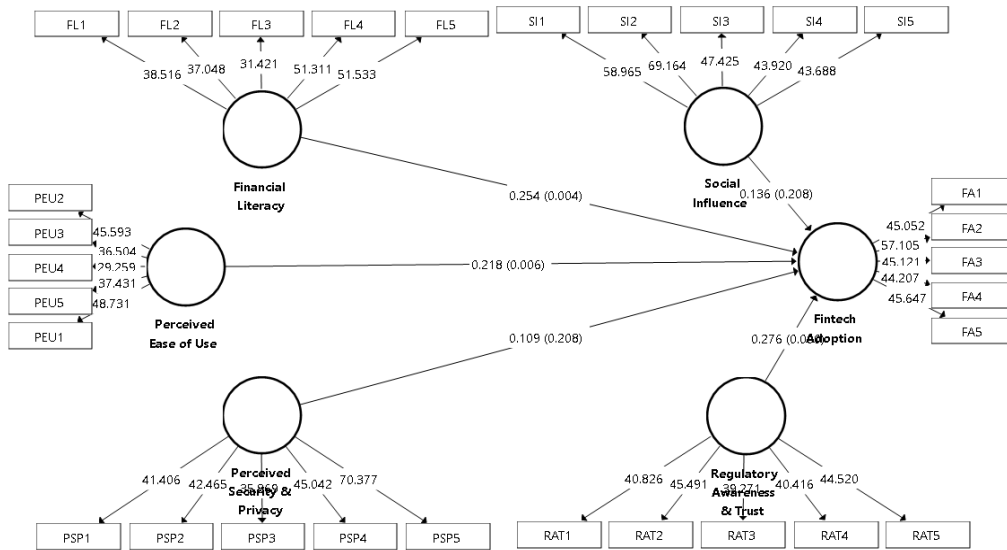
Construct	F square	VIF	R square	Q square
Financial Literacy	0.075	2.774		
Perceived Ease of Use	0.065	2.068		
Perceived Security & Privacy	0.063	2.838		
Regulatory Awareness & Trust	0.094	2.103		
Social Influence	0.072	2.923		
FinTech Adoption			0.928	0.785

Table 6 presents the predictive relevance and multicollinearity assessment of the structural model for FinTech adoption among business students at Pokhara University. The F-square values measure the effect size of each independent variable on FinTech adoption, with values above 0.02 indicating small, 0.15 moderate, and 0.35 large effects. All constructs exhibited small effect sizes, with Regulatory Awareness & Trust (0.094) and Financial Literacy (0.075) having the strongest impact. Variance Inflation Factor (VIF) values assess multicollinearity, ensuring that the predictor variables are not highly correlated. Because all VIF values remained below the critical threshold of 5, multicollinearity was not a concern in the model (Vatcheva et al., 2016). The R-square (0.928) for FinTech Adoption indicates that 92.8% of the variance in adoption behavior is explained by the independent variables, demonstrating a strong model fit. The Q-square (0.785) confirmed the predictive relevance of the model, as values above zero

suggested that the model had substantial predictive accuracy. These results reinforce the robustness of the structural model in explaining FinTech adoption among university students. The diagram for the structural model is given below.

Figure 3

Structural Model of the key drivers of FinTech Adoption among Business Students



Artificial Neural Network (ANN)

Figure 4

Artificial Neural Network Diagram

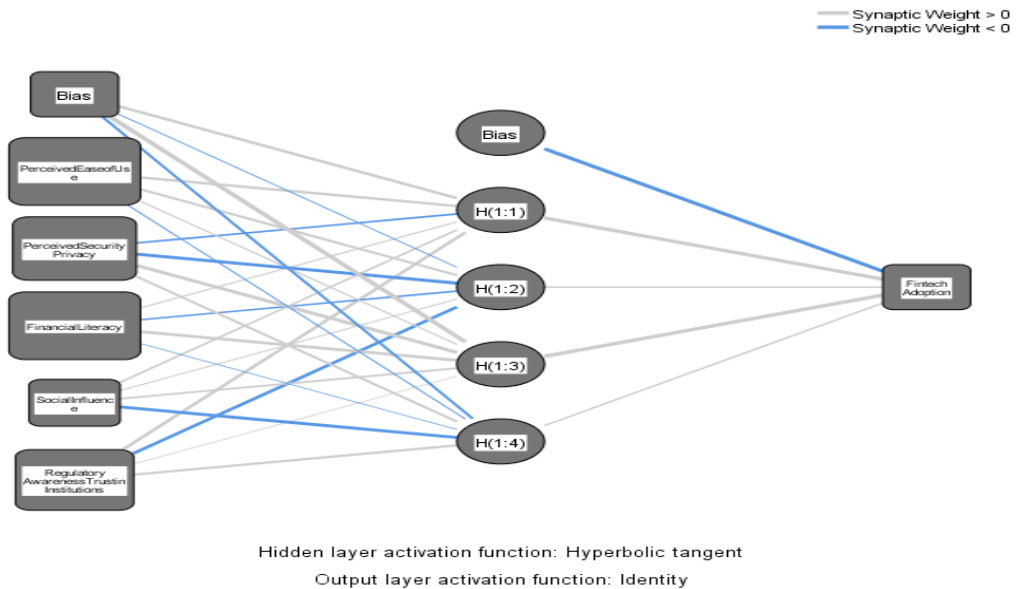


Table 7*RMSE Table*

Training			Testing			Total Samples
N	SSE	RMSE	N	SSE	RMSE	
283	10.540	0.193	37	0.885	0.155	320
290	8.945	0.176	30	0.979	0.181	320
289	9.440	0.181	31	0.973	0.177	320
285	10.458	0.192	35	0.915	0.162	320
279	7.309	0.162	41	1.830	0.211	320
289	9.052	0.177	31	0.445	0.120	320
280	9.276	0.182	40	0.995	0.158	320
289	7.710	0.163	31	1.804	0.241	320
282	9.337	0.182	38	0.634	0.129	320
290	8.456	0.171	30	1.011	0.184	320
Mean	9.052	0.178	Mean	1.047	0.172	
S.D.	1.037	0.010	S.D.	0.444	0.036	

The Artificial Neural Network (ANN) model illustrated in Figure 4 was used to predict FinTech adoption among business students at Pokhara University. Table 7 presents the Root Mean Square Error (RMSE) values for both the training (90%) and testing (10%) phases, which assess the model's predictive accuracy. The training phase included 10 different runs, with sample sizes ranging from 279 to 290, yielding an average RMSE of 0.178 and a Sum of Squared Errors (SSE) mean of 9.052, indicating a stable learning process. The testing phase, which also includes 10 different runs with sample sizes between 30 and 41, shows an average RMSE of 0.172 and an SSE mean of 1.047, suggesting good generalization capability. The standard deviation (S.D.) values for the RMSE in both phases remained low (0.010 for training and 0.036 for testing), further reinforcing the reliability of the model. Figure 5 shows the RMSE distribution, highlighting the minimal fluctuations in the prediction error.

Figure 5

RMSE diagram

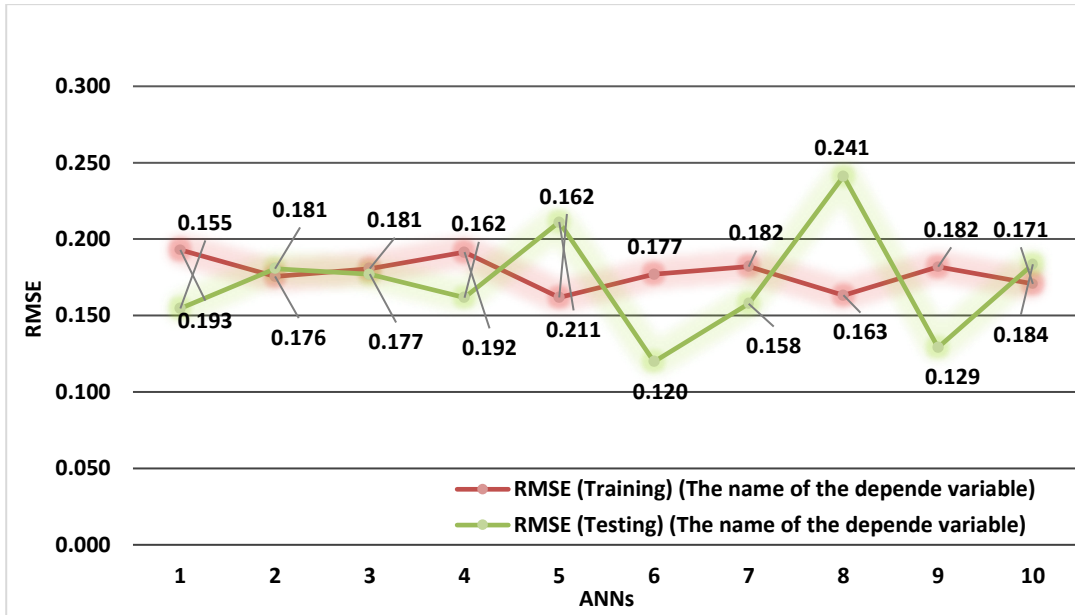


Table 8

Sensitivity Analysis

Neural Network	Perceived Ease of Use	Perceived Security Privacy	Financial Literacy	Social Influence	Regulatory Awareness Trust in Institutions
NN(I)	0.688	0.427	0.933	0.575	1.000
NN(II)	1.000	0.839	0.832	0.607	0.349
NN(III)	0.670	0.593	0.766	0.442	1.000
NN(IV)	0.511	0.117	0.552	0.582	1.000
NN(V)	0.901	0.861	1.000	0.368	0.420
NN(VI)	0.810	0.562	1.000	0.404	0.606
NN(VII)	0.674	0.312	0.673	0.311	1.000
NN(VIII)	0.874	0.780	1.000	0.358	0.495
NN(IX)	0.821	0.247	1.000	0.759	0.452
NN(X)	1.000	0.908	1.000	0.538	0.846
Average	0.795	0.565	0.876	0.494	0.717
Normalized Percentage (%)	90.78%	64.48%	100.00%	56.46%	81.86%

Table 8 presents the sensitivity analysis of the Artificial Neural Network (ANN) model, evaluating the relative importance of key predictors in FinTech adoption among business students at Pokhara University. The table displays the sensitivity values of five

independent variables Perceived Ease of Use, Perceived Security & Privacy, Financial Literacy, Social Influence and Regulatory Awareness & Trust in Institutions across ten neural network models (NN I–X). The average sensitivity values indicate that Financial Literacy (0.876) and Regulatory Awareness & Trust (0.717) have the highest impact on FinTech adoption, followed by Perceived Ease of Use (0.795), Perceived Security & Privacy (0.565), and Social Influence (0.494). The normalized percentage values further highlight the dominance of Financial Literacy (100%) and Regulatory Awareness & Trust (81.86%) as the most influential factors, whereas Social Influence (56.46%) had the lowest relative importance. These findings suggest that students' knowledge of financial concepts and their trust in regulatory institutions play a crucial role in shaping their adoption behavior, reinforcing the importance of financial education and institutional transparency in promoting FinTech usage.

Table 9

Comparison of PLS-SEM and ANN Results Predicting FinTech Adoption

Predictor → DV	PLS-SEM β	SEM Rank	ANN Importance (%)	ANN Rank
Financial Literacy → FA	.254**	2	100.00	1
Regulatory Awareness → FA	.276***	1	81.86	2
Perceived Ease of Use → FA	.218**	3	90.78	3
Perceived Security → FA	.109	4	64.48	4
Social Influence → FA	.136	5	56.46	5

Note: β = standardized path coefficient; ANN = Artificial Neural Network; Importance = Normalized relative importance, *** $p < .001$, ** $p < .01$.

Table 9 shows the comparative analysis results of the PLS-SEM and ANN showing both convergence and divergence in identifying key drivers of FinTech adoption. Both methods consistently identified Regulatory Awareness & Trust (PLS-SEM: $\beta = .276$, rank 1; ANN: 81.86%, rank 2) and Financial Literacy (PLS-SEM: $\beta = .254$, rank 2; ANN: 100%, rank 1) as top predictors. However, ANN revealed stronger non-linear relationships for Perceived Ease of Use (90.78% importance vs. $\beta = .218$) and Perceived Security (64.48% vs. insignificant $\beta = .109$), suggesting these factors influence adoption through complex pathways that PLS-SEM's linear approach couldn't detect. Social Influence remained the weakest predictor in both methods. The ANN's superior

detection of Perceived Ease of Use's importance (rank 3 vs. PLS-SEM rank 3 but higher relative weight) highlights its value in capturing real-world decision-making complexity where usability perceptions may interact non-linearly with other factors. These findings suggest that while regulatory trust and financial knowledge are consistently crucial, user experience factors gain importance when considering their nuanced interactions in adoption decisions.

The findings indicate that Perceived Ease of Use (PEU), Financial Literacy (FL), and Regulatory Awareness & Trust (RAT) significantly impact FinTech adoption (FA). The path from PEU to FA was significant ($\beta = 0.218$, $p = 0.006$), suggesting that students were more likely to adopt FinTech when they perceived it to be easy to use. This aligns with previous studies that emphasize the role of ease of use in technology adoption (Aggarwal et al., 2023). Likewise, Financial Literacy has a significant and positive effect on FA ($\beta = 0.254$, $p = 0.004$), supporting research that highlights the importance of financial knowledge in adopting digital financial services (Bermeo-Giraldo et al., 2023; Prabhakaran & Mynavathi, 2023). Additionally, Regulatory Awareness & Trust are a strong predictor of FA ($\beta = 0.276$, $p < 0.001$), reinforcing the role of regulatory support in fostering trust in FinTech solutions (Amnas et al., 2024; Arner et al., 2019).

Conversely, Perceived Security & Privacy (PSP) and Social Influence (SI) did not significantly affect FinTech adoption. The paths from PSP to FA ($\beta = 0.109$, $p = 0.221$) and from SI to FA ($\beta = 0.136$, $p = 0.205$) were both insignificant. This contradicts previous studies, which suggest that security concerns play a crucial role in FinTech adoption (Lim et al., 2019; Nangin et al., 2020). The results may indicate that Pokhara University students are relatively comfortable with digital financial platforms and have not experienced significant security breaches. Similarly, the lack of significance for Social Influence suggests that university students may make independent decisions regarding FinTech adoption rather than being influenced by peers (Hasan et al., 2024). Overall, this study contributes to the growing body of literature on FinTech adoption among young populations, emphasizing the importance of ease of use, financial literacy and regulatory trust, while questioning the relevance of security concerns and social influence in this demographic (Tan, 2024). Future research should explore these findings in diverse cultural and educational contexts.

Conclusion

This study sheds light on the key drivers influencing FinTech adoption among business students at Pokhara University. The results indicate that Perceived Ease of Use, Financial Literacy and Regulatory Awareness & Trust are the most influential factors

driving FinTech adoption, while Perceived Security & Privacy and Social Influence were not found to be significant in this context. These findings provide valuable insights into the relative importance of user-friendly platforms, financial education and trust in regulatory frameworks, highlighting that for this demographic, concerns about security and social influence may be secondary. This study contributes to the expanding literature on technology adoption, particularly within the FinTech domain and offers an updated perspective on the factors driving adoption among younger tech-savvy populations.

From a practical standpoint, these findings have important implications for the development of FinTech platforms. Developers should prioritize enhancing the user interface and making platforms intuitive to ensure ease of use, as this factor significantly impacts adoption. Educational institutions, on the other hand, should incorporate financial literacy into their curricula, focusing on FinTech-related topics to equip students with the knowledge needed to navigate digital financial services effectively. Furthermore, policymakers must focus on establishing clear, transparent, and stable regulatory frameworks that will help build trust among potential users. While security concerns and social influence did not emerge as key drivers in this study, they may become more significant over time, particularly as FinTech platforms evolve and students transition into professional roles. Consequently, future research could explore how these factors evolve and their impact on adoption at different stages of a user's life and career.

Author Contributions: Bibek Karmacharya conceived the study, developed the framework and hypotheses, collected and analyzed the data, interpreted the results and authored the manuscript, guiding critical methodological decisions.

Informed Consent Statement: Oral consent was obtained from all the individuals involved in this study.

Data Availability Statement: The data supporting the findings of this study are available from the corresponding authors upon reasonable request.

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Appendix

Operationalization of variables

Perceived Ease of Use	Source
1. FinTech applications are easy to use for financial transactions.	(Nangin et al., 2020), (Singh et al., 2020), (Hasan et al., 2024)
2. I can quickly learn how to use a new FinTech application without much assistance.	
3. The interface of FinTech apps (e.g., eSewa, Khalti, PayPal) is user-friendly.	
4. I prefer using FinTech services because they save time compared to traditional banking.	
5. I feel comfortable using FinTech applications for my daily financial activities.	

Perceived Security & Privacy

6. I believe FinTech applications provide secure transactions.	(Stewart & Jürjens, 2018), (Lim et al., 2019), (Zhang et al., 2023)
7. I am concerned about my personal and financial information being misused in FinTech apps.	
8. I trust FinTech companies to protect my financial data.	
9. I only use FinTech applications that have strong authentication measures (e.g., OTP, biometric login).	
10. Fear of cyber fraud prevents me from fully adopting FinTech solutions.	

Financial Literacy

11. I understand the basic concepts of digital payments, online banking, and crypto currency.	(Yoshino et al., 2020), (Morgan & Trinh, 2020), (Prabhakaran & Mynavathi, 2023)
12. I feel confident managing my finances using FinTech applications.	
13. I can differentiate between reliable and unreliable FinTech services.	
14. My knowledge of investment platforms (e.g., stock trading apps) helps me make informed decisions.	
15. I actively educate myself about financial technology trends.	

Social Influence

16. My friends and peers influence my decision to use FinTech applications.	(Kurniasari et al., 2022), (Xie et al., 2021), (Aggarwal et al., 2023)
17. I started using FinTech services after seeing positive reviews from others.	
18. Social media and influencers affect my trust in FinTech solutions.	
19. My family encourages the use of digital financial services.	
20. I feel more comfortable using FinTech services when people around me use them too.	

Regulatory Awareness & Trust in Institutions

21. I am aware of the government regulations regarding FinTech services in Nepal.	(Balaskas et al., 2024), (Anagnostopoulos, 2018), (Khan et al., 2023)
22. I trust the Nepalese regulatory bodies (e.g., Nepal Rastra Bank) to ensure FinTech security.	
23. I prefer using FinTech services that are government-approved and regulated.	
24. Lack of clear policies on FinTech discourages me from using these services.	
25. I believe the government plays an important role in promoting safe and secure FinTech adoption.	

FinTech Adoption

26. I actively use FinTech applications for financial transactions.	(Firmansyah et al., 2022), (Setiawan et al., 2021), (Bermeo-Giraldo et al., 2023)
27. I prefer FinTech solutions over traditional banking methods.	
28. I regularly make online payments using digital wallets or mobile banking apps.	
29. I am open to trying new FinTech services as they become available.	
30. I believe FinTech will become the primary mode of financial transactions in the future.	



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Assessing the Effectiveness of SMEs Loans in Mahendranagar: Utilization, Misuse, and Growth Barriers

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Abstract

Small and Medium Enterprises (SMEs) are the backbone of local economies, especially in emerging regions like Mahendranagar, Nepal. Despite the availability of various loan products from financial institutions, their effectiveness in supporting business growth remains inconsistent. This study investigates the role of loan products in enhancing SME performance, identifies challenges in loan utilization, and explores key issues such as financial literacy, misuse of loans, and loan monitoring gaps. Data were collected through field surveys, interviews with business owners, and analysis of bank reports. Findings highlight the need for improved financial education, stricter loan monitoring, and customized loan products. Recommendations include better financial literacy programs, stronger monitoring systems, and tailored banking services to address the unique needs of SMEs.

Keywords: *SME Loans, Financial Literacy, Loan Monitoring, Business Sustainability*

Introduction

Small and Medium Enterprises (SMEs) are vital components of economic and social development, particularly in developing nations like Nepal. These enterprises significantly contribute to local economies by creating jobs, promoting entrepreneurship, and driving innovation. Representing around 90 percent of businesses in Nepal (World Bank, 2021), SMEs provide livelihood opportunities to a large portion of the population. Their importance is especially pronounced in regions like Mahendranagar, where they form the backbone of community-based economic activities.

In Mahendranagar, it is common for SME owners to divert loans meant for business purposes into personal expenditures, such as purchasing property or funding education

abroad. For instance, survey findings from this study revealed that 40% of SMEs redirected loan funds for non-business purposes. This misallocation reduces the effectiveness of loans, creating repayment challenges and negatively affecting business growth.

Mahendranagar, located in Sudurpaschim Province's Kanchanpur district, exemplifies the transformative role of SMEs in fostering regional development. Businesses such as retail shops, garment outlets, grocery stores, and small-scale manufacturing units are pivotal in addressing local unemployment and improving productivity. Despite their substantial impact, SMEs in the region face significant obstacles that hinder their long-term sustainability and growth. Chief among these challenges is access to affordable finance. Many small entrepreneurs find it difficult to navigate the formal lending system due to complex requirements, including high collateral demands and detailed documentation processes.

Even when financing is secured, improper fund utilization often undermines its intended benefits. In Mahendranagar, it is common for SME owners to divert loans meant for business purposes into personal expenditures, such as purchasing property or funding education abroad. This misallocation of resources reduces the effectiveness of loans and contributes to repayment challenges. Additionally, financial literacy remains a pressing issue, with many entrepreneurs struggling to manage budgets, plan investments, or forecast revenues effectively.

Efforts by Nepal Rastra Bank to address these issues include policies designed to enhance financial access, such as interest subsidies, collateral-free loans, and credit guarantees. While these measures have improved credit availability, their effectiveness is often diminished by limited awareness and insufficient monitoring systems. For instance, the absence of digital tools to track loan utilization makes it difficult for financial institutions to ensure proper fund allocation.

This study focuses on Mahendranagar as a case to explore the opportunities and barriers faced by SMEs in accessing and managing financial support. By analyzing real-life examples, the research aims to evaluate how loans are utilized, uncover recurring challenges, and assess the impact of existing policies. The findings aim to provide actionable recommendations, including strategies for improving financial literacy,

enhancing loan monitoring, and fostering collaboration between stakeholders to create a supportive business ecosystem.

By examining these issues, the study seeks to emphasize the vital role SMEs play in regional economic development. With its diverse range of businesses, Mahendranagar serves as a microcosm for understanding the broader challenges and opportunities facing SMEs in Nepal. The insights derived from this analysis can inform targeted interventions to promote sustainable growth and economic resilience in similar regions across the country.

This study focuses on Mahendranagar as a case to explore the opportunities and challenges SMEs face in accessing and managing financial support. It examines how loans are utilized, identifies key obstacles such as financial literacy gaps and loan misuse, and assesses the effectiveness of current financial policies. Through surveys, interviews, and case studies, this research aims to provide practical recommendations to improve financial literacy, strengthen loan monitoring, and enhance collaboration between SMEs, financial institutions, and regulators. The findings will help create a supportive business environment, ensuring that loan products contribute to sustainable SME growth in Mahendranagar and similar regions.

Review of Literature

Importance of SMEs in Economic Growth

Small and Medium Enterprises (SMEs) play a crucial role in economic development, contributing to over 50% of employment and up to 40% of GDP in developing countries (World Bank, 2021). In Nepal, SMEs account for 90% of registered businesses, making them key drivers of employment and innovation (FNCCI, 2022). Despite their significance, SME growth is often restricted by financial constraints, as nearly 60% of SMEs in Nepal report difficulties in securing formal credit (Nepal Rastra Bank, 2022). Other major challenges include inadequate infrastructure, limited access to technology, and market fluctuations (Asian Development Bank, 2022).

Financial Access for SMEs

Access to finance remains one of the major challenges for SME growth. Studies show that nearly 60% of SMEs in Nepal face difficulties securing bank loans due to high collateral requirements, complex application procedures, and stringent credit assessments (Nepal Rastra Bank, 2023). As a result, a significant portion of SMEs around 40% turn to informal lenders, where interest rates often exceed 30% annually, leading to high financial risks (International Finance Corporation, 2021). To address this, Nepal Rastra Bank has introduced policies such as mandatory SME credit allocations and collateral-free microloans, yet challenges persist due to lack of awareness and accessibility issues

Loan Utilization and Challenges

Proper loan utilization is a cornerstone of SME success, yet many businesses struggle in this regard. In Nepal, loans intended for business expansion are frequently misused for personal expenses, such as purchasing land or funding education abroad. This diversion not only hampers business growth but also increases the likelihood of loan default, affecting the creditworthiness of borrowers and the financial stability of lenders. Furthermore, many SME owners lack the necessary financial planning skills to allocate borrowed funds efficiently. Without clear business strategies, funds are often used for short-term needs rather than long-term growth. External factors, such as market volatility and operational risks, further exacerbate these challenges, making effective loan utilization an area requiring urgent attention.

Nepal Rastra Bank's Provisions for SME Financing

Nepal Rastra Bank (NRB) has implemented various policies to improve access to credit for SMEs and support their growth. These include mandatory credit allocation, collateral-free loans of up to NPR 2 million for micro-enterprises, and interest subsidies of up to 5% for loans in priority sectors like agriculture and manufacturing. Additionally, NRB has introduced refinancing facilities to assist SMEs affected by economic downturns and credit guarantee schemes to encourage banks to lend to higher-risk enterprises. While these measures have increased the availability of credit, their implementation has been inconsistent. Many SME owners are unaware of these provisions, and banks often face difficulties in ensuring compliance with policy requirements.

Financial Literacy and its Impact on SMEs

Proper loan utilization plays a crucial role in SME sustainability, yet many businesses face challenges in this aspect. Studies indicate that in Nepal, around 40% of SME loans are misused for non-business purposes, such as land purchases and overseas education funding (Nepal Rastra Bank, 2023). This misallocation significantly affects loan repayment rates, increasing the likelihood of defaults. Furthermore, financial literacy is a key factor in loan effectiveness. Research by the OECD (2020) highlights that SMEs with strong financial knowledge are 50% more likely to reinvest profits into business expansion and maintain timely repayments. However, in Nepal, approximately 65% of SME owners lack formal financial training, leading to difficulties in budgeting, forecasting, and resource management (Nepal Rastra Bank, 2022).

Role of Digitalization in SME Growth

Digital tools have revolutionized how businesses operate, offering solutions for payments, inventory management, and financial tracking. For SMEs in Mahendranagar, adopting digital systems can increase efficiency, reduce costs, and enhance transparency. Mobile banking, digital wallets, and point-of-sale systems enable businesses to maintain accurate records and streamline transactions. However, the adoption of these technologies is limited due to infrastructure challenges, such as unreliable internet access, and low digital literacy among business owners. Expanding digital literacy programs and investing in infrastructure development are crucial to maximizing the benefits of digitalization for SMEs in Nepal.

Sector-Specific Challenges in Mahendranagar

The challenges faced by SMEs vary significantly by sector, necessitating tailored interventions. In Mahendranagar, retail businesses often struggle with inventory management and competition from larger outlets. Agricultural enterprises face unique risks, including weather uncertainties and fluctuating market prices, which can severely impact profitability. The hospitality sector, which includes restaurants and guesthouses, requires constant investment in quality upgrades and customer service to remain competitive. Addressing these sector-specific challenges requires innovative solutions, such as targeted loan products, technical assistance, and capacity-building programs that equip businesses with the skills and resources needed to overcome these barriers.

Lessons from International Practices

Globally, successful SME financing models provide valuable lessons for Nepal. In India, digital lending platforms have streamlined credit access for small businesses, reducing processing times and costs. Kenya's mobile money solutions have revolutionized financial inclusion, enabling even micro-enterprises to access credit and manage transactions seamlessly. These examples highlight the importance of leveraging technology and tailoring financial solutions to local needs. By adopting similar practices, Nepal can create an ecosystem where SMEs thrive, contributing to inclusive and sustainable economic growth.

The Need for Collaboration

Collaboration among financial institutions, government bodies, and community organizations is critical for fostering SME development. Joint efforts can streamline access to resources, ensure consistent monitoring, and provide mentorship opportunities for entrepreneurs. For instance, partnerships between banks and local governments can facilitate the delivery of financial literacy programs and sector-specific support. Additionally, community organizations can act as intermediaries, bridging the gap between SMEs and formal financial institutions. A collaborative approach can ensure that policies and initiatives are effectively implemented, maximizing their impact on SME growth and sustainability.

Methodology

This study adopts a systematic mixed-methods approach to provide an in-depth analysis of the utilization, challenges, and effectiveness of SME financing in Mahendranagar. By combining both qualitative and quantitative data, the methodology ensures a holistic understanding of the issues faced by SMEs while also allowing for actionable recommendations based on real-world evidence.

Structured surveys were conducted with 50 SME owners from diverse sectors, including retail, agriculture, manufacturing, hospitality, and services. The questionnaire covered a range of topics such as loan usage patterns, financial literacy, repayment challenges, and perceived barriers to growth. The survey also included questions on the awareness and effectiveness of government financial policies. In-depth, semi-structured interviews were conducted with 10 key informants, including bank RMs, loan officers, cooperative

representatives, and microfinance institution personnel. These interviews provided detailed insights into the lending processes, challenges in loan monitoring, and observations on SME financial behavior. Open-ended questions allowed participants to share experiences and perspectives freely. This study incorporates case studies to complement quantitative findings and provide a deeper understanding of SME loan utilization. While surveys and statistical data capture overall trends, they may not fully explain the underlying reasons behind loan misuse, repayment struggles, or successful financial management. Case studies allow for an in-depth exploration of individual business experiences, highlighting real-world challenges and decision-making processes that impact loan effectiveness.

Five SMEs from different sectors were selected to ensure diversity in financial behavior and industry-specific issues. These case studies illustrate how factors such as financial literacy, risk management, and loan monitoring influence business success or failure. By analyzing real-life scenarios, this research bridges the gap between numerical findings and practical insights, offering valuable recommendations for financial institutions, policymakers, and SME owners.

Secondary data was gathered from a variety of sources such as Official Reports of the selected SMEs. A purposive sampling method was employed to ensure that the study represented the most relevant businesses and stakeholders in Mahendranagar. The criteria for selecting SMEs included:

- a. Businesses that had availed loans within the last three years to ensure contemporary relevance.
- b. Representation across key economic sectors, including retail, agriculture, and services.
- c. A mix of micro, small, and medium-sized enterprises to reflect varying financial and operational capacities.

Similarly, financial institutions were selected based on their active involvement in SME financing, including commercial banks, cooperatives, and microfinance organizations operating in the region.

Survey responses were compiled and analyzed using statistical tools to identify patterns and trends. Key metrics such as the proportion of loans misused, repayment challenges,

and the relationship between financial literacy and business performance were examined. Descriptive analysis was applied to both structured and open-ended questionnaire responses to identify key patterns and trends in SME loan utilization. For structured responses, numerical data were summarized using percentages, averages, and frequency distributions. For open-ended responses, a thematic approach was used, where responses were categorized based on recurring themes such as financial literacy, loan misuse, repayment challenges, and business expansion. This method allowed for the identification of common issues among SMEs while preserving the depth of qualitative insights. The integration of both quantitative and qualitative data ensured a comprehensive analysis of the challenges and opportunities SMEs face in accessing and utilizing financial support.

Thematic analysis was applied to interview transcripts and case study narratives to identify recurring themes and insights. The analysis focused on understanding systemic barriers, individual decision-making processes, and the impact of external factors like market fluctuations and regulatory constraints. Each case study was evaluated to extract lessons that could inform broader recommendations.

A comparative approach was adopted to align primary data findings with secondary sources. This method helped validate trends observed in the field and provided a contextual framework for interpreting results. For example, insights from SME owners were compared against regional and national statistics to assess alignment or deviations.

Ethical Considerations

The study adhered to strict ethical standards to ensure the privacy and confidentiality of all participants. Key ethical practices included:

- a. **Informed Consent:** All participants were briefed about the study's objectives and voluntarily provided written or verbal consent before participating.
- b. **Anonymity:** Personal and business identities were anonymized in survey data, interview responses, and case study narratives to protect privacy.
- c. **Transparency:** Participants were informed about how their data would be used, and they had the option to withdraw from the study at any point.
- d. **Data Security:** Collected data was stored securely and used solely for the purposes of this research.

Limitations

While the study provides valuable insights, it is not without limitations:

- a. Geographic Focus:** The findings are specific to Mahendranagar and may not fully represent SME challenges in other parts of Nepal, particularly in more urbanized or remote areas.
- b. Sample Size:** Although the sample was diverse, the relatively small number of participants limits the generalizability of the results to all SMEs.
- c. Secondary Data Gaps:** The availability of comprehensive, up-to-date secondary data on SME activities in Mahendranagar was limited, posing challenges in contextualizing certain findings.

Despite these limitations, the mixed-methods approach and the inclusion of diverse perspectives ensure that the study offers meaningful and actionable insights into the realities of SME financing in Mahendranagar.

Case Studies

The following case studies highlight real-life scenarios of SMEs in Mahendranagar and their experiences with loan utilization. These cases represent both successful and challenging outcomes, illustrating the broader themes of financial literacy, loan misuse, sector-specific challenges, and the impact of external factors. All names of businesses and individuals in the following case studies have been anonymized to protect their privacy and maintain confidentiality.

The Misused Opportunity: A Retail Venture

Mr. Sharma, the owner of a retail business in Mahendranagar, secured a loan of NPR 1,500,000 from a commercial bank with the intention of expanding his inventory and upgrading his shop. Initially, he used a portion of the loan to stock high-demand products, resulting in a 30% increase in monthly revenue within six months. Encouraged by this growth, Mr. Sharma considered using the remaining funds to invest further in his business.

However, financial pressure from personal commitments led him to redirect a significant portion of the loan toward covering his daughter's wedding expenses. This diversion of funds disrupted his repayment schedule, as the additional revenue

generated by his business was insufficient to meet the loan's monthly installment requirements. Over time, repayment delays damaged his creditworthiness, and the bank initiated legal action to recover the outstanding amount.

This case underscores the critical need for separating personal and business finances. It also highlights the importance of financial literacy and effective monitoring mechanisms to ensure that loans are used as intended. Had Mr. Sharma been better informed about loan management or had access to mentorship, he might have been able to avoid misusing funds and sustain his business growth.

Transport Collapse: A Tale of Overextension

Mr. Raut, a transportation business owner, acquired a loan of NPR 20 million to expand his fleet by purchasing five additional trucks. In the first year, the investment appeared successful, as consistent earnings allowed him to meet repayment obligations and cover operational expenses. However, unforeseen risks soon destabilized the business.

Two of the newly purchased trucks were involved in accidents, resulting in significant damages. While the vehicles were insured, the claims covered only a portion of the losses, leaving Mr. Raut with reduced operational capacity and mounting repair costs. To address these challenges, he borrowed an additional NPR 5 million to settle debts and maintain operations. Unfortunately, a slowdown in market demand further strained his finances, making loan repayments unmanageable. Eventually, the business had to shut down, leaving Mr. Raut in severe financial distress.

This case illustrates the importance of risk management in SME operations. Adequate insurance coverage, contingency planning, and diversified income sources could have helped Mr. Raut navigate these challenges. Additionally, sector-specific loan products, such as financing tied to insurance against operational risks, could have mitigated the impact of unforeseen events.

Agro-Investments Gone Awry

Ms. Bista, an agro-entrepreneur specializing in vegetable farming, obtained a loan of NPR 2 million to expand her operations. Her plan involved acquiring better seeds, fertilizers, and irrigation equipment to boost productivity. Initially, the investment showed promise, as her farm began yielding higher-quality produce, leading to increased sales in the local market.

However, instead of reinvesting all the profits into her business, she lent half of the loan amount to a relative at a higher interest rate, hoping to generate additional income. Unfortunately, the relative defaulted on the informal loan, leaving her unable to fund essential operations or repay the bank. As a result, the bank foreclosed on her collateral property, causing her business to collapse.

This case highlights the dangers of deviating from loan objectives and the risks of engaging in informal lending. It also underscores the importance of financial discipline and adhering to a business plan. Structured financial literacy programs tailored for agro-entrepreneurs could have equipped Ms. Bista with the knowledge needed to manage her finances more effectively.

Successful Growth: The Model Boutique

Ms. Thapa, the owner of a small boutique in Mahendranagar, is an inspiring example of effective loan utilization. She borrowed NPR 300,000 from a local cooperative to upgrade her equipment and add high-quality inventory to her store. With a clear business plan, she focused entirely on enhancing her product offerings and reaching a wider customer base.

Using digital marketing strategies, including social media promotions, she managed to double her customer base within a year. Her monthly revenue grew from NPR 50,000 to NPR 150,000, enabling her to repay the loan on time and secure a larger second loan for further expansion. By reinvesting profits and maintaining strict financial discipline, she transformed her boutique into one of the most popular stores in the region.

This case demonstrates the transformative potential of disciplined loan utilization, financial planning, and leveraging technology for business growth. It also highlights how proper guidance and access to digital tools can enable SMEs to achieve sustainable success.

Misaligned Priorities in Restaurant Management

Mr. Khadka, a restaurant owner in Mahendranagar, secured a loan of NPR 1 million to renovate his dining space and expand his menu offerings. The intention was to attract more customers and compete with newer establishments in the area. However, instead of using the funds for these purposes, he decided to invest in a piece of land, hoping for future appreciation.

While the land's value increased over time, the restaurant's declining revenue due to poor management left him unable to meet loan repayments. As a result, the bank seized the land, causing him to lose both the investment and the opportunity to grow his business. The restaurant eventually closed, leaving him in financial ruin.

This case underscores the importance of aligning loans with business priorities and adhering to well-defined growth strategies. It also highlights the need for robust monitoring systems to ensure that borrowed funds are used as intended.

Findings of Case Studies

The case studies highlight recurring patterns in SME loan utilization, revealing how financial behavior, business strategy, and external risks influence repayment outcomes. While some businesses successfully leveraged loans for expansion, others faced setbacks due to financial mismanagement, unforeseen circumstances, or inadequate loan monitoring.

One of the most pressing concerns is loan misuse, as seen in the case of Mr. Sharma's retail business, where more than 50% of the loan was diverted toward personal expenses. This issue is widespread, as survey results indicate that 42% of SMEs in Mahendranagar admitted to misallocating business loans for non-business purposes. Similarly, Ms. Bista's agricultural enterprise suffered financial losses when she loaned a portion of her borrowed capital to a relative, leading to repayment difficulties. These cases reinforce the need for stronger financial discipline and better awareness among SME owners about the consequences of fund diversion.

On the other hand, effective loan utilization was evident in cases such as Ms. Thapa's boutique, where careful financial planning and reinvestment in inventory led to a 200% increase in revenue within a year. Her disciplined approach demonstrates how proper business planning, digital marketing strategies, and reinvestment can maximize loan benefits. This aligns with broader research findings, which indicate that SMEs with higher financial literacy levels are significantly more likely to achieve business growth and sustain repayments.

However, even well-planned loans can be disrupted by external risks. The case of Mr. Raut's transport business illustrates the impact of unforeseen challenges, where vehicle accidents and reduced market demand made loan repayment unmanageable. His

experience emphasizes the need for sector-specific risk mitigation strategies, such as insurance coverage and contingency planning. Likewise, Mr. Khadka's restaurant business suffered due to misaligned financial priorities, where investing in real estate rather than business improvement ultimately led to its closure.

These case studies reinforce key recommendations for financial institutions, policymakers, and SME owners:

- a. Strengthening financial literacy programs to help entrepreneurs manage funds effectively.
- b. Enhancing loan monitoring mechanisms to prevent misallocation of borrowed capital.
- c. Developing sector-specific loan products that include risk-mitigation components like insurance.
- d. Encouraging digital tools and strategic reinvestment to maximize business growth.

By addressing these areas, SME loan effectiveness can be significantly improved, reducing default rates and fostering long-term economic sustainability in Mahendranagar and similar regions.

Results and Discussion

The analysis of SME loan utilization in Mahendranagar reveals critical insights into the opportunities and challenges faced by entrepreneurs. The findings are derived from the case studies, surveys, and interviews conducted during the research. They shed light on key patterns in loan management, financial literacy, sector-specific risks, and the effectiveness of existing policies. Below are the primary findings of the study:

Loan Misuse Remains a Persistent Issue

Approximately 40% of SMEs in Mahendranagar diverted loan funds for purposes other than business development. The case of Mr. Sharma, who redirected funds meant for expanding his retail business to cover personal expenses, is a common example. Such misuse often stems from financial pressures outside the business and a lack of clear boundaries between personal and business finances. Loan misuse directly affects repayment capabilities, leading to defaults and strained relationships with lenders.

Financial Literacy Gaps

A lack of financial literacy is a significant barrier to effective loan utilization. Many SME owners struggle with basic financial management tasks, such as budgeting, cash flow forecasting, and record-keeping. This is evident in cases like Ms. Bista, who lent part of her business loan informally, resulting in financial instability. Entrepreneurs often lack the knowledge to evaluate risks or make informed decisions, highlighting the urgent need for targeted financial training programs.

Challenges in Risk Management

External risks, such as market fluctuations, operational failures, and unforeseen events, severely impact SME performance. The transport business owned by Mr. Raut demonstrates how accidents and insufficient insurance coverage can destabilize an otherwise promising enterprise. Many SMEs do not have contingency plans or adequate risk mitigation strategies, leaving them vulnerable to disruptions. This underscores the need for sector-specific financial products that address unique risks, such as weather-related issues for agriculture or equipment insurance for transportation.

Positive Impact of Disciplined Loan Utilization

SMEs that adhered to their loan objectives and invested strategically in business growth achieved remarkable success. The example of Ms. Thapa's boutique highlights how financial discipline, coupled with a clear business plan, can lead to significant revenue growth and sustainability. Entrepreneurs who utilized loans for productive purposes, such as upgrading equipment or expanding inventory, not only improved their financial standing but also enhanced their creditworthiness, enabling further access to financing.

Sector-Specific Challenges

Each industry faces unique challenges that influence loan utilization and business outcomes. In retail, issues like inventory mismanagement and competition from larger outlets are prevalent. Agriculture businesses, like that of Ms. Bista, often encounter risks from weather uncertainties and fluctuating market prices. The hospitality sector, represented by the case of Mr. Khadka, requires continuous investment in quality and customer experience, which many fail to prioritize due to misaligned financial goals.

Weak Monitoring Mechanisms

Loan monitoring remains a critical gap in the financial ecosystem. Despite guidelines from Nepal Rastra Bank mandating quarterly reviews for working capital loans, many banks lack the manpower or technological tools to ensure compliance. This has allowed loan misuse to persist, as seen in multiple case studies. Improved monitoring systems, such as digital tools and periodic audits, are essential for ensuring accountability and effective fund utilization.

Limited Awareness of Policy Provisions

While Nepal Rastra Bank has introduced several supportive policies, including interest subsidies and collateral-free loans, many SMEs are unaware of these benefits. This lack of awareness prevents entrepreneurs from leveraging available resources, further exacerbating challenges in accessing affordable credit. Financial institutions also face difficulties in effectively communicating and implementing these policies at the grassroots level.

Role of Digital Tools in Business Success

The study found that SMEs utilizing digital tools, such as social media marketing and digital payment systems, were more likely to achieve sustainable growth. For instance, the boutique owned by Ms. Thapa leveraged online platforms to expand its customer base, demonstrating the potential of technology to enhance business performance. However, the adoption of such tools remains limited due to infrastructure challenges and low digital literacy among SME owners.

Overextension and Debt Management

Some SMEs overextend themselves by taking on excessive debt without fully evaluating repayment capacities or market conditions. The transport business owned by Mr. Raut is a clear example of how over-reliance on loans can lead to financial distress. Effective debt management practices and a more cautious approach to borrowing are necessary to prevent similar outcomes.

Need for a Collaborative Ecosystem

The findings emphasize the importance of collaboration between financial institutions, government bodies, and local organizations. Joint efforts can address gaps in financial

literacy, risk management, and policy awareness, creating a supportive ecosystem for SMEs. For instance, partnerships could enable the development of tailored training programs and sector-specific financial products that align with the unique needs of Mahendranagar's businesses.

Conclusion

Small and Medium Enterprises (SMEs) are a critical pillar of Nepal's economy, particularly in Mahendranagar, where they contribute significantly to employment and entrepreneurship. However, this study finds that their growth is hindered by key challenges such as loan misuse, financial illiteracy, and weak risk management strategies. The findings indicate that a collaborative approach among financial institutions, policymakers, and SME owners is essential for improving loan effectiveness. By implementing structured financial education, digital monitoring systems, and sector-focused financial products, SMEs in Mahendranagar and beyond can achieve greater financial stability and long-term economic contribution. This research provides a foundation for future policy improvements, enabling more sustainable SME financing models across Nepal. To improve SME financing in Mahendranagar and similar regions, targeted interventions must address loan misuse, financial literacy gaps, and sector-specific challenges.

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Determinants of Job Satisfaction among Teachers in Nepal

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Abstract

This study aims to investigate the variables influencing private school teachers' job satisfaction in Nepal, which is affected by various elements, including pay and incentives, working conditions, management support, workloads, job security, etc. Based on a questionnaire survey, the research employed a descriptive and causal comparative research design. For the self-administrative questionnaire survey, a total of 202 samples of teachers from various private schools were selected according to the judgmental basis of the researcher. KMO, Bartlett's test, regression analysis, correlation, reliability analysis, and descriptive analysis have all been performed. This study demonstrates how teachers generally feel about their workload, managerial assistance, working conditions, job security, and pay and incentives. The study finds a strong and beneficial correlation between pay and incentive, working condition, management support, and job security, whereas there is no correlation exists between job satisfaction and workload. The private schools should prioritize improving working conditions, management support, job security, and pay and incentives to enhance teachers' satisfaction while addressing workload-related challenges to mitigate dissatisfaction.

Keywords: *pay, job security, workload, management support, working condition.*

JEL Classification codes: *J28, I21 and M54.*

Introduction

Job satisfaction reflects employees' personal perceptions and feelings about their work, which can range from positive to negative (Skaalvik & Skaalvik, 2014). When there is alignment between the demands of a job and an employee's expectations, it typically leads to increased job satisfaction. Conversely, a mismatch between these factors often results in dissatisfaction (Demirdag, 2015). Various elements, such as emotional well-being, working conditions, and goal alignment, significantly influence job satisfaction. Previous research has identified key elements such as goal support, self-efficacy, workplace atmosphere, goal clarity, and the caliber of relationships with supervisors as

major contributors to job satisfaction (Badri et al., 2013). Job satisfaction is the degree of favorableness towards the job (Tenjeen, 2013). Job satisfaction is a positive emotional state driven by internal elements like success, acknowledgment, and the work itself, while dissatisfaction stems from extrinsic factors like organizational policies, salary, and the circumstances of labor (Herzberg et al., 1959). In most of the countries, teachers often report dissatisfaction with their jobs. This dissatisfaction has had a negative impact on educational quality and student motivation levels (Amin et al., 2013). High absenteeism and turnover rates have been attributed to the substantial dissatisfaction of teachers (Akram et al., 2015).

Teacher job satisfaction in Nepal is shaped by various factors, including working conditions, salary, opportunities for professional development, and the type of institution. Research conducted among higher secondary school teachers in Kathmandu and Lalitpur districts identified significant links between employment satisfaction elements including compensation, oversight, advancement prospects, and relationships with assistants (Bhattarai, 2016). Similarly, teachers in government schools within Kathmandu reported high levels of satisfaction, primarily impacted by factors like age and professional background (Sharma, 2020). According to a comparative study, instructors in private schools frequently report feeling less satisfied with their jobs than those in public schools, primarily due to disparities in job security and employee benefits (Thadathil, 2018). Additionally, mathematics teachers in Nepal reported moderate satisfaction levels, with professional growth opportunities emerging as a key factor (Pokharel, 2020). Another study focusing on community school teachers in Kathmandu highlighted dissatisfaction stemming from limited autonomy and a lack of adequate resources (Karki, 2022). Moreover, addressing job satisfaction among teachers has been associated with enhanced organizational citizenship behaviors, underscoring the need to tackle these issues effectively (Subedi, 2021).

Despite existing research, gaps remain regarding the specific determinants of job satisfaction among private school teachers in Nepal. Prior studies have predominantly focused on public school teachers, leaving limited insight into how factors such as pay and incentives, working conditions, managerial support, workloads, and job security impact private school educators.

This study aims to bridge this gap by investigating these critical aspects and their influence on job satisfaction among Nepali private school teachers, providing insights to inform policies that enhance teacher retention and overall educational quality.

Review of Literature

Several theories explain job satisfaction by highlighting different influencing factors. Herzberg's Two-Factor Theory categorizes job satisfaction into intrinsic motivators (e.g., achievement, recognition, and growth) and extrinsic hygiene factors (e.g., salary, work conditions, and policies), stating that the absence of hygiene factors leads to dissatisfaction, while motivators enhance satisfaction. Maslow's Hierarchy of Needs suggests that employees seek to fulfill basic needs such as security and physiological well-being before achieving higher-level satisfaction through esteem and self-actualization. The Job Characteristics Model by Hackman and Oldham emphasizes that job satisfaction depends on five core dimensions: skill variety, task identity, task significance, autonomy, and feedback. Adams' Equity Theory asserts that employees assess fairness in rewards compared to their efforts and peers, influencing their satisfaction levels. Vroom's Expectancy Theory further explains that job satisfaction is based on employees' expectations of rewards, effort, and performance outcomes. These theories collectively provide a framework for understanding the factors that drive job satisfaction in various work environments.

Research on teacher satisfaction has been conducted globally and within Nepal, highlighting key determinants across different contexts. Skaalvik and Skaalvik (2019) found that supportive leadership, collaboration, and access to resources significantly influenced teacher satisfaction across 35 countries. Similarly, Nguyen and Springer (2023) identified manageable workloads, administrative support, and professional growth opportunities as crucial factors in American schools, with dissatisfaction leading to attrition (Hong, 2013). Studies in Malaysia and India also emphasized the importance of work environment, compensation, promotion, and job roles in shaping satisfaction (Kumari, 2014). Mehboob (2012), using Herzberg's Two-Factor Theory, discovered that extrinsic factors such as policies and working conditions influenced satisfaction more than intrinsic ones among university faculty in Pakistan. In Nepal, Thapa (2018) found that urban private school teachers had higher satisfaction due to better salaries and resources, whereas rural teachers faced challenges related to poor working conditions. Shrestha and Agrawal (2024) examined educators' satisfaction in Madhesh Pradesh, identifying both intrinsic and extrinsic factors as influential, although compensation and the physical environment had minimal impact. Similarly, Lamsal et al. (2024) analyzed job satisfaction in Devdaha Municipality of Rupandehi District of Nepal showing that compensation, advancement, and supervision played significant

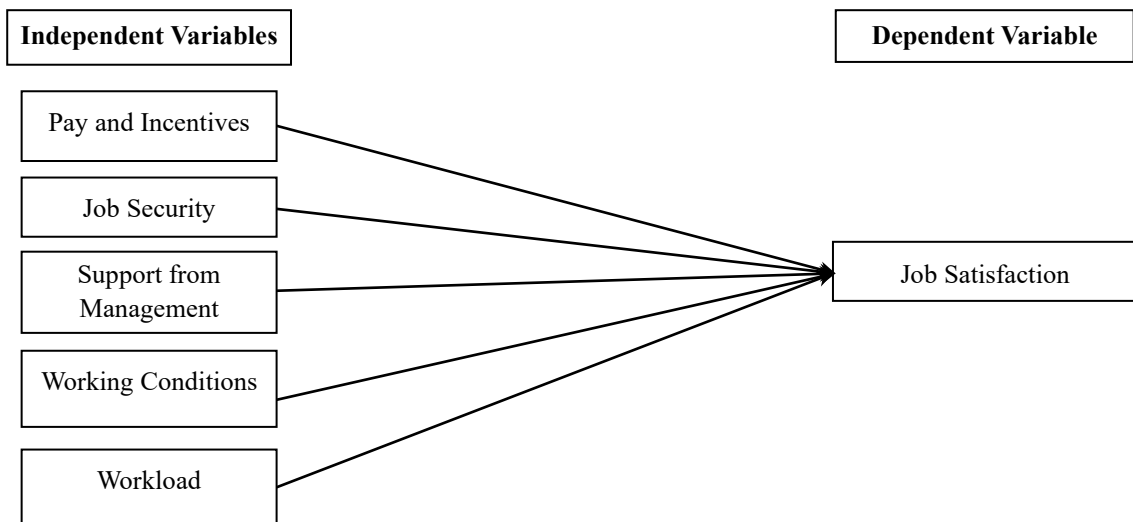
roles. Collectively, these studies emphasize the multifaceted nature of teacher satisfaction and the need for policy interventions to enhance working conditions and professional growth opportunities.

The results highlight how crucial it is to attend to teachers' professional demands and enhance working circumstances in order to increase job satisfaction, both in Nepal and abroad. These insights highlight the need for effective policies and interventions that can enhance teachers' experiences and improve overall educational outcomes.

From the above study, the theoretical framework has been developed as follows.

Figure 1

Theoretical framework



Hypothesis of the Study

The following alternative hypothesis has been formulated and examined in the research.

Pay and Incentives and Job Satisfaction

Herzberg's theory and empirical research both provide strong evidence for the connection between compensation, incentives, and work satisfaction. Financial incentives are crucial in ensuring that instructors stay content and dedicated to their jobs, even when they might not be the major source of motivation. The findings of Lamsal et al. (2024), who stress that equitable pay is a critical factor impacting work satisfaction among teachers in Nepal, are consistent with this.

Hypothesis (H1): Pay and incentives have a positive effect on job satisfaction.

Job Security and Job Satisfaction

Both theoretical and empirical research have extensively demonstrated the connection between job security and job satisfaction. Job stability is crucial for workplace satisfaction, as explained by Maslow's Hierarchy of Needs and Herzberg's Two-Factor Theory. According to empirical research, teachers who have steady jobs report greater levels of satisfaction, which improves engagement and performance (Lamsal et al., 2024). Therefore, maintaining job security is essential to creating a productive workplace in the education sector.

Hypothesis (H2): Job security has a positive effect on job satisfaction.

Support from Management and Job Satisfaction

Organizational Support Theory and Herzberg's Two-Factor Theory both emphasize how important effective management support is to work satisfaction. Strong leadership support is associated with greater work satisfaction and commitment among teachers, according to research, including Lamsal et al. (2024). Nguyen et al. (2020) found that managerial support lowers burnout and increases teacher engagement. According to Tadesse (2021), a lack of managerial assistance also raises turnover rates, lowers morale, and causes unhappiness. A responsive and encouraging management style should be given top priority in educational institutions in order to enhance teachers' performance and well-being.

Hypothesis (H3): Support from management has a positive effect on job satisfaction.

Working Conditions and Job Satisfaction

Research demonstrates that, in line with Maslow's and Herzberg's theories, working environments have a significant impact on job satisfaction. Research, such as those conducted by Lamsal et al. (2024) and Nguyen et al. (2020), shows that elements including adequate facilities, reasonable workloads, and a supportive atmosphere boost teacher satisfaction and lower attrition. According to Tadesse (2021), educators at schools with enough resources are also happier and more driven. Increasing teacher job happiness and performance requires improving infrastructure, cutting workload, and creating a favorable work environment.

Hypothesis (H4): Working conditions have a positive effect on job satisfaction.

Workload and Job Satisfaction

Maslow's Hierarchy of Needs theory and Herzberg's Two-Factor Theory both emphasized how employees' job satisfaction is affected by their workload. This is supported by studies like those by Tadesse (2021) and Nguyen et al. (2020), support this, showing that a balanced workload can enhance teachers' motivation and satisfaction by meeting both their professional and personal needs.

Hypothesis (H5): Workloads have a positive effect on job satisfaction.

Methodology

The research employed a survey that was based on a descriptive and causal comparative research methodology to determine the variables influencing teachers' job satisfaction in private schools in the Rupandehi district of Nepal. The primary data has been used to identify the effect of pay and incentives, working conditions, support from management, workloads, job security, etc., on job satisfaction.

Population and Sample

The Rupandehi district is used by the researcher for personal convenience. The study was conducted on all private schools in the Rupandehi district that were registered in the National Private and Boarding Schools Association, Nepal (N-PABSON), and the Private Boarding Schools Association, Nepal (PABSON). To make the sample representative, only 210 teachers were purposefully selected from the entire teaching workforce. Hair et al. (2010) stressed that for high statistical power and prediction accuracy, a sample size of more than 200 responders should be sufficient while using a multiple regression model. The questionnaires were distributed by the researcher during in-person visits to the 25 schools. Out of the 210 surveys, 202 (96.19%) of the replies were judged to be fully completed and were therefore sent for additional processing and analysis.

Survey Methodology

Respondents were given self-administered questionnaires to complete in order to collect the necessary primary data. The survey was divided into two sections, the first of which collected demographic data from the respondents and the second of which contained statements about the various facets of job satisfaction. The second part contained twenty-four questions about job satisfaction regarding five dimensions: pay and incentives, working conditions, support from management, workloads, and job security.

Variables and Measurement

In this study, pay and incentives, working conditions, support from management, workloads, job security, etc. are used as independent variables, while the dependent variable is job satisfaction. Researcher has employed the Likert-type scale items, with a range of the following scales: Strongly disagree (number one), disagree (number two), disagree slightly (number three), agree (number five), and strongly agree (number six).

Data Analysis

The researcher obtained numerical data through the survey and analyzed it using statistical methods. The information gathered from the survey was processed in two stages using SPSS (Statistical Package for the Social Sciences) version 27. To ensure the reliability and validity of the data, Cronbach's alpha, the KMO measure, and Bartlett's test were utilized. The researcher used mean, standard deviation, skewness, kurtosis, frequency distribution, etc. for the detailed explanation of variables. Regression analysis and correlation are examples of inferential statistics that have been applied.

The relationship between the dependent and independent variables has been demonstrated using the regression model as follows.

$$JST = \beta_0 + \beta_1(PI) + \beta_2(JS) + \beta_3(SFM) + \beta_4(BC) + \beta_5(BL) + e. \quad \dots(1)$$

Results and Discussion

Descriptive Analysis

Descriptive analysis was employed to evaluate the data's validity, reliability, and internal consistency.

Table 1

Descriptive Analysis

	Cronbach's Alpha	Mean	Std. Deviation	Skewness	Kurtosis
Working Conditions	0.903	4.772	0.881	-1.676	4.648
Job Security	0.862	4.826	0.891	-1.999	5.797
Support from Management	0.776	4.444	0.849	-1.156	2.280
Pay and Incentives	0.842	4.141	0.932	-0.953	1.267
Workload	0.813	2.446	0.677	0.896	1.200
Job Satisfaction	0.786	4.651	0.864	-1.581	4.068

The descriptive analysis of Table 1 shows that job security and working conditions are the most highly rated factors, with mean scores of 4.8255 and 4.7723, respectively, and strong reliability values (Cronbach's alpha of 0.862 and 0.903). Overall job satisfaction is also rated positively, with a mean score of 4.6510. However, workload stands out as the least favorable factor, with a low mean score of 2.4455 and positive skewness, indicating a general sense of dissatisfaction in this area. All variables demonstrate good reliability ($\alpha > 0.7$), low variability ($SD < 1$), and a trend toward higher ratings, as reflected in the negative skewness of most factors. The high kurtosis for job security (5.797) and working conditions (4.648) indicates that responses for these factors are closely clustered around the mean, underlining their critical role in employee satisfaction. To further improve satisfaction, organizations should focus on addressing workload-related concerns.

Correlation Analysis

The Table 2 bivariate correlation analysis reveals significant positive relationships between most variables at the 0.01 level. Working conditions (WC) show a strong positive correlation with job security (JS) ($r = 0.712$) and job satisfaction (JST) ($r = 0.652$), suggesting that increased job stability and satisfaction are correlated with improved working conditions. Similarly, pay and incentives (PI) have a significant positive correlation found with job satisfaction ($r = 0.746$), highlighting their critical role in employee satisfaction. Support from management (SFM) also correlates positively with job satisfaction ($r = 0.513$) but to a lesser extent than other factors. Workload (WL), however, shows no significant relationship with most variables, including job satisfaction ($r = 0.040$), suggesting it operates independently of other factors. Overall, these results emphasize the importance of improving working conditions, pay and incentives, and management support to enhance job satisfaction.

Table 2

Bivariate Correlation

	WC	JS	SFM	PI	WL	JST
Working Conditions	1					
Job Security	0.712**	1				
Support from Management	0.424**	0.373**	1			
Pay and Incentives	0.573**	0.484**	0.480**	1		
Workload	-0.016	0.023	0.036	-0.062	1	
Job Satisfaction	0.652**	0.638**	0.513**	0.746**	0.040	1

** Correlation is significant at the 0.001 level (2-tailed).

Bartlett's Test and KMO

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy in Table 3 indicates that the sample size is suitable for factor analysis, which is 0.802; a value greater than 0.7 is deemed acceptable (Kaiser, 1974). Additionally, the Bartlett's Test of Sphericity confirms that the correlations between the variables are strong enough to proceed with factor analysis, with a chi-square value of 509 and degrees of freedom (df) of 15 (Bartlett, 1950). All of these findings support the notion that the data is appropriate for determining underlying dimensions or constructs since it satisfies the presumptions required for analysis of components.

Table 3

KMO and Bartlett's Test

Kaiser-Meyer-Olkin (KMO)	Measure of Sampling Adequacy	0.802
Bartlett's Test of	Approx. Chi-Square	509
Sphericity	df	15

Regression Analysis

The regression coefficients Table 4 provides insight into the contributions of each independent variable to job satisfaction. The standardized coefficients (Beta) indicate that pay and incentives ($\beta = 0.488$, $p = 0.000$) are the strongest predictor, followed by support from job security ($\beta = 0.253$, $p = 0.000$), working condition ($\beta = 0.139$, $p = 0.026$), and support from management ($\beta = 0.123$, $p = 0.010$). These variables have statistically significant effects, as their p-values are below the 0.05 threshold, so hypotheses 1, 2, 3, and 4 are accepted. Conversely, workload ($\beta = 0.061$, $p = 0.137$) and the constant term ($p = 0.478$) are not statistically significant, indicating that workload has a negligible direct impact on job satisfaction in this model, so hypothesis 5 is rejected. These results highlight the significance of enhancing working conditions, support from management, job security, and pay and incentives to enhance employee satisfaction.

Table 4*Regression Coefficients*

Model	Standardized Coefficients Beta	t	Sig.
1 (Constant)	-	0.712	0.478
Working Condition	0.139	2.236	0.026
Job Security	0.253	4.355	0.000
Support from Management	0.123	2.601	0.010
Pay and Incentive	0.488	9.279	0.000
Work Load	0.061	1.492	0.137

Dependent Variable: JST

The survey finds that job security and working conditions are the most influential factors in job satisfaction of teachers, with mean scores of 4.8255 and 4.7723, respectively. These factors exhibit high reliability (Cronbach's alpha > 0.85), low variability, and a tendency toward higher ratings, as evidenced by negative skewness and high kurtosis. In contrast, workload is the least favorable factor, with a mean score of 2.4455 and positive skewness, suggesting widespread dissatisfaction in this area. The correlation analysis further highlights strong positive relationships between key variables. Working conditions are strongly correlated with both job security ($r = 0.712$) and job satisfaction ($r = 0.652$), while pay and incentives show a significant positive relationship with job satisfaction ($r = 0.746$). Support from management also positively influences job satisfaction ($r = 0.513$), albeit to a lesser extent. However, workload appears to function independently, with no significant correlation with job satisfaction ($r = 0.040$).

According to the regression analysis, working conditions are identified as the strongest predictor ($\beta = 0.488$, $p = 0.000$), followed by support from management, job security, and pay and incentives, all of which show statistically significant effects ($p < 0.05$). In contrast, workload shows no significant direct effect ($\beta = 0.061$, $p = 0.137$), indicating that it does not substantially contribute to job satisfaction in this model. These findings suggest that private schools should prioritize improving working conditions, management support, job security, and pay and incentives to enhance the job satisfaction of teachers while addressing workload-related challenges to mitigate dissatisfaction.

The results of this study complement and add to the body of knowledge about the variables affecting teachers' job satisfaction. Pay and incentives ($\beta = 0.488$, $p = 0.000$), job security ($\beta = 0.253$, $p = 0.000$), management support ($\beta = 0.123$, $p = 0.010$), and working conditions ($\beta = 0.139$, $p = 0.026$) all significantly improve job satisfaction, according to the regression results. These findings are consistent with Herzberg's Two-Factor Theory and earlier research such as that of Lamsal et al. (2024) and Nguyen et al. (2020). These elements were shown to be essential for guaranteeing teacher motivation, engagement, and general satisfaction, especially compensation and job security.

However, the hypothesis about workload ($\beta = 0.061$, $p = 0.137$) was not supported since it had no significant effect on job satisfaction, indicating that other factors, such as employment security and financial incentives, could have a greater influence. This is in contrast to other studies that highlighted workload as a significant factor influencing teacher satisfaction, suggesting that more study into the ways in which workload interacts with other variables may be required. Overall, the study shows that in order to increase teacher satisfaction in educational settings, it is critical to improve pay, job security, management support, and working environment.

Conclusion

The study concludes that job security, working conditions, and other factors all have a big impact on teachers' job satisfaction. support from management, and pay and incentives, all of which demonstrate strong predictive power in the model. Working conditions emerge as the most critical factor, followed by support from management, job security, and pay and incentives, highlighting their significance in creating a productive workplace. Although workload does not show a significant direct impact on job satisfaction, its low ratings and positively skewed distribution are noteworthy highlight areas requiring improvement to better address employee concerns. The results underscore the importance of private schools prioritizing enhancements in critical areas such as working conditions and support systems to foster greater satisfaction and improve overall workplace well-being.

This study highlights several actionable insights for private schools seeking to enhance employee satisfaction. Improving working conditions should be a top priority, focusing on both the physical environment and the psychological aspects of the workplace to create a more supportive and positive atmosphere. Strengthening job security through

clear communication and fair employment policies can build trust and loyalty among employees. Furthermore, offering competitive pay and incentives that reflect employee performance and align with market trends can significantly boost motivation and satisfaction. Although workload was not found to have a direct impact on job satisfaction, its low ratings suggest the need for strategies like balanced task allocation and adequate support to alleviate stress and promote well-being. By addressing these areas collectively, private schools can cultivate a more engaged and productive workforce.

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Enhancing Rural E-Governance through Improved Digital Access: A Case Study of Sudurpashchim Province, Nepal

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Abstract

This article investigates how improved digital access can foster effective rural e-governance in Sudurpashchim Province, Nepal. The province, marked by its geographical remoteness and limited infrastructure, continues to struggle with digital inclusion. A purposive survey approach was employed, targeting 300 rural respondents selected via purposive sampling. The study assessed internet accessibility, ownership of digital devices, digital literacy, and usage of online government services. Findings indicate that only 35% of the population has consistent access to the internet, mainly through mobile phones, while 65% remain digitally excluded. Major barriers identified include limited connectivity, unaffordable digital tools, and lack of awareness or training. Additionally, respondents from digitally connected areas showed a higher tendency to use government services online, such as applying for official documents or accessing agricultural support. The research highlights how digital exclusion leads to a perpetuation of marginalization in public service delivery. To address this, the study proposes targeted policy interventions including the expansion of broadband networks, community-based training programs, and affordable device schemes. The findings offer valuable insights for policymakers aiming to strengthen inclusive e-governance in underdeveloped regions. This research contributes to the broader discourse on digital equity, public service innovation, and rural development through evidence-based policy recommendations.

Keywords: E-Governance, Digital Access, Rural Nepal, Internet Use, Sudurpashchim Province, Digital Inclusion

Introduction

Sudurpashchim Province (SUP), located in the far-western region of Nepal, is one of the most geographically and socio-economically marginalized areas in the country. It comprises remote hills and plains, where physical connectivity and infrastructure development have traditionally lagged behind other provinces. While the federal structure in Nepal aims to ensure balanced development, the digital divide between

urban and rural areas remains a major challenge, especially in provinces like Sudurpashchim.

Sudurpashchim Province, encompassing nine districts, is characterized by a predominantly agrarian economy, high poverty rates, and limited industrial development. The region's rugged terrain and dispersed settlements pose significant challenges to infrastructure development, including roads, electricity, and telecommunications. These factors contribute to the digital divide, as residents in remote areas have limited access to digital technologies and services.

E-governance, defined as the use of information and communication technologies (ICT) to deliver government services to citizens in an efficient, transparent, and accessible manner, has emerged as a transformative tool in public administration (Tennakoon, 2020). Globally, digital governance has improved service delivery, increased citizen engagement, and promoted inclusive development. However, rural areas in developing countries continue to face multiple barriers including poor internet infrastructure, low digital literacy, and lack of awareness of online services (Addo & Senyo, 2021; Naqvi et al., 2021).

In Nepal, although the government has introduced several digital initiatives under the Digital Nepal Framework, the reach and effectiveness of these programs in rural areas like Sudurpashchim remain limited. According to Bhagat (2023), increasing digital adoption in Nepal is paralleled by rising digital exclusion in remote areas. Giri (2019) notes that access to services in rural Nepal is often hindered not only by geography but also by a lack of digital tools and skills. Thus, digital accessibility plays a critical role in shaping the success of rural e-governance.

Digital inclusion is crucial for ensuring equitable access to government services, especially in rural regions. It enables citizens to participate in governance processes, access essential services, and improve their socio-economic conditions. Therefore, understanding and addressing the barriers to digital inclusion in Sudurpashchim Province is vital for the successful implementation of e-governance initiatives.

Problem Statement

Despite national efforts to advance digital governance, rural regions in Nepal, particularly Sudurpashchim Province, continue to face significant challenges in

accessing and utilizing e-governance services. These challenges are rooted in poor internet infrastructure, high device and service costs, and limited digital literacy.

Objectives of the Study

- a. To assess the state of digital accessibility in rural areas of Sudurpashchim Province.
- b. To identify the barriers that prevent rural populations from utilizing digital governance services.
- c. To compare service utilization between populations with and without access to digital tools.
- d. To provide policy recommendations for enhancing digital inclusivity and e-governance.

Review of Literature

In the Context of Nepal E-governance in developing countries has received growing attention, with studies highlighting its potential to improve administrative efficiency and civic participation. Kuzior et al. (2023) emphasized that digital infrastructure and technological advancement are essential for smart and inclusive governance. Grigalashvili (2022) clarified the conceptual differences between e-government and e-governance, stressing the importance of both in enabling responsive administration.

In the Nepali context, Maharjan et al. (2021) found that Nepal's digital systems face challenges such as low software usability, lack of trust, and inadequate digital readiness. Bhagat (2023) noted the rise in cybersecurity issues that further hinder e-governance. Giri (2019) underlined the structural barriers such as insufficient internet access, unreliable electricity, and limited ICT infrastructure as key obstacles to implementing e-services in rural Nepal. Pandey and Risal (2019) discovered that community participation, digital awareness, and social dynamics significantly influence the effectiveness of e-governance initiatives. Buddhacarya et al. (2019) discussed the potential of mobile technology and social media in promoting digital services.

Naqvi et al. (2021) stressed the need for integrating IoT and cloud technologies in public administration. Ridwanullah et al. (2019) reported that e-governance systems significantly improve service satisfaction. Sahoo et al. (2022) applied multi-criteria decision-making methods to optimize e-governance practices in India. Al-Rzoky et al.

(2019) advocated for real-time analytics for improving digital services. Bojang et al. (2019) outlined the challenges of ICT adoption in developing countries, including sustainability concerns.

Badu (2024) focused on the challenges of implementing e-governance in the local bodies of Sudurpashchim Province. The study identified top challenges including ICT infrastructure, ICT literacy/awareness, laws and policy, finance, privacy and security, and the digital divide. The research emphasized the importance of government empowerment, stakeholder recognition, and active engagement to address emerging needs and ensure the success of e-governance projects.

Shewale and Laturkar (2019) discussed the success of Common Service Centers in Maharashtra. Abah et al. (2019) identified inadequate legal frameworks and infrastructure as key challenges in Nigeria. Lee-Geiller and Lee (2019) proposed a democratic model for citizen-centered e-governance. Zulmasyhur et al. (2024) recently emphasized the role of digital transformation in governance reforms.

Research Gap

While various studies have explored e-governance at national or urban levels, few have concentrated on rural areas, particularly Sudurpashchim Province. National policies often overlook localized needs and conditions. There is limited empirical data that addresses how digital infrastructure, affordability, and training gaps affect the actual use of e-governance tools by rural citizens. This study aims to fill this gap by examining real experiences of rural users and non-users to identify how and why disparities exist.

Significance of the Study

The study contributes localized, evidence-based findings to inform both policymakers and digital inclusion advocates. By assessing ground-level realities of digital access, this research helps uncover the gaps between policy design and practical implementation. The insights provided can aid in designing more inclusive and efficient rural e-governance strategies by aligning digital services with community needs, infrastructure capacity, and user capabilities. Moreover, the study serves as a reference for future researchers and development agencies focusing on digital transformation in underdeveloped regions.

Research Methodology

This research followed a quantitative approach using structured questionnaires. The focus was to understand the level of digital access and its correlation with usage of e-governance services. A purposive sampling method was adopted to select 300 participants from different rural municipalities across Sudurpashchim Province. The sample included individuals with varying access to internet services, digital devices, and literacy levels. Data were collected through field surveys conducted in person. Respondents were asked to complete a structured questionnaire designed to assess their digital access and behavior. Below is a sample of the questionnaire and their tabular format.

Table 1

Research Questions

Question Number	Question
Q1	Do you have regular access to the internet at home or on your phone?
Q2	What type of digital device(s) do you own? (Smartphone, Computer, None)
Q3	Have you ever used any government services online? (Yes/No)
Q4	If yes, which services have you used? (e.g., utility bill payment, ID)
Q5	Have you received any formal training in using digital tools? (Yes/No)
Q6	What are the main challenges you face in using digital services?

Results and Discussion

The collected data were analyzed using descriptive statistics to determine the percentage of respondents with internet access, device ownership, usage of online government services, and digital skills training. The analysis also involved cross-tabulation to identify correlations between digital access and the utilization of e-governance services. Table 2 shows the descriptive statistics of respondents.

Table 2

Descriptive Statistics of Respondents

Respondent ID	Internet Access	Device Type	Used E-Services	Trained in Digital Skills
1	Yes	Smartphone	Yes	No
2	No	None	No	No
3	Yes	Smartphone	Yes	Yes
4	No	Feature Phone	No	No
5	Yes	Computer	Yes	Yes
6	No	Smartphone	No	No
7	Yes	Smartphone	Yes	No
8	No	None	No	No
...

Table 2 shows the status of the access and uses of the digital services among the respondents. The results show that majority of the respondents have access to digital services.

Table 3

Data Summary Table

Digital Services Usage	% with Access	% without Access
Internet Access	35%	65%
Smartphone Ownership	40%	60%
Used Online Gov Services	30%	70%
Trained in Digital Skills	20%	80%

The results show that only 35% of respondents had consistent internet access, with mobile phones serving as the primary means of digital interaction. Those with access were more likely to use government digital services such as applying for citizenship

certificates, paying utility bills online, and accessing agricultural subsidies. About 30% of respondents had used such services. Meanwhile, 65% of respondents still relied on manual methods or visits to physical offices due to limited or no access to the internet.

A significant number of respondents 60% did not own a smartphone or computer, indicating that affordability is a major constraint. Moreover, only 20% of participants had received some form of digital training. These individuals demonstrated more confidence and frequency in using online platforms, underscoring the importance of digital literacy programs.

Regions with better digital connectivity also exhibited greater use of digital platforms for governance. Interview feedback revealed that areas with community Wi-Fi hubs or ICT centers had significantly better engagement with e-services. On the other hand, lack of infrastructure and awareness in other villages led to total reliance on paper-based services. This unevenness reflects not only infrastructural gaps but also social and educational disparities.

These findings support the conclusions of Pandey and Risal (2019), who argued that digital tools alone are not enough without awareness and training. Furthermore, it aligns with global trends noted by Kuzior et al. (2023), where successful digital governance depends on access, affordability, and education

Conclusion

The study concludes that digital accessibility significantly influences the adoption of e-governance in Sudurpashchim Province. Poor internet infrastructure, lack of affordable devices, and low digital literacy are major obstacles. However, evidence shows that regions with better access and training make greater use of digital public services. To promote inclusive governance, the government should invest in expanding broadband coverage, subsidize devices for low-income families, and implement community-based digital literacy programs. Bridging the digital divide is essential to ensure equal access to public services and inclusive development in rural Nepal.

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Impact of Financial Risks on the Performance of Cooperatives in Nepal

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Abstract

The research aimed to assess the impact of financial risk on the performance of cooperatives in Nepal, focusing on credit, operational, and market risks as independent variables and financial performance as the dependent variable. The Research data was collected from financial statements and regulatory records spanning mid-July, 2015 to mid-July, 2024, though the dataset was unbalanced due to variations in the licensing years of the cooperatives. Descriptive statistics, including mean, standard deviation, and range, summarized the data, while correlation coefficient analysis examined the strength and direction of relationships between variables. Regression analysis explored the causal impact of financial risks on cooperative performance. The findings revealed that credit risk had a marginal but its positive effect on financial performance, operational risk had a significant and positive influence, and market risk demonstrated a substantial positive impact. The study underscores the importance of comprehensive risk management practices and recommends that cooperatives implement strategies addressing all dimensions of financial risk, including the recruitment of skilled risk management professionals, to enhance overall performance.

Keywords: Financial Risks, Risk Management, Credit Risk, Operational Risk, Market Risk, Financial Performance, Cooperatives.

Introduction

Particularly, cooperatives play a crucial role in financial inclusion by targeting individuals and organizations that are often excluded from formal banking systems. In Nepal, cooperatives provide essential financial services such as savings, loans, and other services to their members, thereby contributing to the economic development of local

communities. These cooperatives are member-owned and democratically controlled, with the aim of offering financial services at competitive rates, promoting economic benefits for their members. Globally, the cooperative movement has been rapidly growing. As of 2021, there are over 86,000 credit unions worldwide, with more than 375 million members across 118 countries (World Council of Credit Unions, 2021).

Cooperatives have emerged as the fastest-growing segment in the global financial system, significantly contributing to economic growth due to their essential role in collecting funds for redistributing the sources of consumers. National Credit Union Administration (2021), the United States is home to 5,099 federally insured credit unions, with approximately 124.3 million members and a total asset base of \$1.85 trillion. This is compared to 5,236 credit unions in 2019, which had 120.40 million members and assets totaling \$ 1.56 trillion. Member deposits saw a remarkable 56% increase in 2020, rising from \$ 1.02 trillion to \$ 1.59 trillion, while gross loans issued grew from \$57.4 million to \$71.9 million during the same period. Although total income generated in 2019 experienced a 5.7% increase, reaching \$320 million, it fell by 11.7% to \$ 282 million in 2020.

Kenya's financial sector is one of the most innovative in Africa and is ranked seventh in the world in terms of overall development (Bwana & Mwakujonga, 2013). The cooperative sector in Kenya has grown quickly, now ranking second in Africa for credit unions and first in terms of membership (WOCCU, 2021). Domestic savings through the cooperatives in Kenya have reached 400 billion, making up 33% of the country's total savings, and the total assets of cooperatives have crossed 300 billion. Kenya's cooperative movement is considered as the strongest in Africa and is among the top 10 worldwide. This shows that cooperatives play a key role in the country's social and economic progress (Kenya Union of Savings and Credit Co-operatives Limited, 2020). Cooperatives faced various risks in their daily operations, including operational, strategic, compliance, business, and financial risks (Maina, 2007). Among these, financial risk stands out as the most significant, as it directly impacts profitability and, consequently the financial performance of cooperatives (Njiru & Iraya, 2020).

The international and local studies reviewed in this research show conflicting results about how financial risks affect financial performance. Akindele (2012) concluded that

effective risk management improves company's performance. Similarly, Aduda and Gitonga (2011) found a positive link between risk management and financial success in Kenya banks. On the other hand, Muriithi et al. (2017) studied commercial banks and found that financial risks, especially liquidity risk, negatively affect their performance. These differences in findings indicate the need for further research. This study aims to fill the gap by examining how financial risks affect the financial performance of cooperative in Nepal. The main goal of this study is to find out how financial risks affect the financial performance of cooperatives in Nepal. It focuses on three types of risks: credit risk, operational risk, and market risk, as the main factors being studied.

Review of Literature

Serwadda (2018) carried out a study to see how credit risk management methods affect the performance of Mahila cooperative banks in Kalaburagi, India. The study looked at how identifying, analyzing, monitoring, and reducing credit risk influences how well the banks operate. Using data collected over time and from different banks, the study found that credit analysis, risk reduction, and recognizing credit risks had a strong positive effect on bank performance. Based on these results, the study suggested that women's cooperative banks should improve their credit analysis tools and strengthen their credit monitoring systems.

Kithuka and Ondabu (2024) conducted a pilot study to explore how managing operational risks is linked to the profitability of cooperatives in Kakamega County. They used a descriptive research approach and focused on four SACCOs in the area. To analyze the data, they used basic statistics like averages and standard deviations, along with other methods to study the relationship between the factors. The study found that better operational risk management is strongly connected to higher profitability in the cooperatives.

Gweyi (2018) studied how managing financial risks affects the financial performance of Deposit-Taking SACCOs (DT-SACCOs) in Kenya. The research looked at how controlling credit risk, interest rate risk, liquidity risk, and operational risk impacts performance, and also considered the effects of the size of the organization. The study used data from 135 DT-SACCOs collected between 2010 and 2015 and applied both basic and advanced statistical methods. The findings showed that properly managing these financial risks leads to better financial performance for the DT-SACCOs in Kenya.

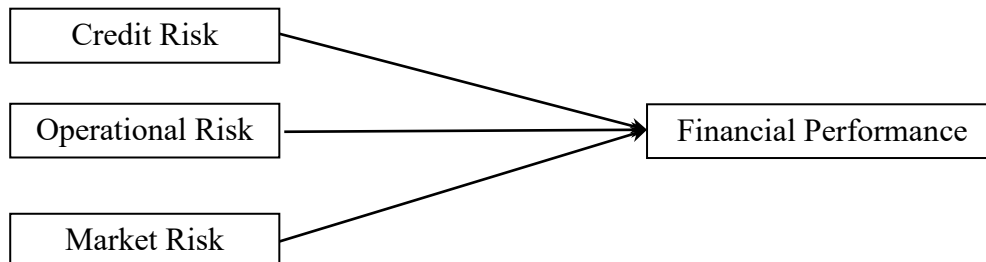
Sohaimi (2013) explored the association between disclosures and liquidity risks, utilizing financial performance metrics such as deposits, liquidity gaps, cash holdings, and non-performing loans (NPLs). The study analyzed data sourced from publications, books, and financial records compiled by Bank Negara Malaysia, covering the period from 1997 to 2012. Multiple regression analysis was applied to evaluate the influence of liquidity risk on banks' capital and reserves. The findings indicated that NPLs exacerbate liquidity risk, significantly impacting the banks' capital reserves.

Conceptual Framework

A conceptual framework illustrates the relationship between credit risk, operational risk, and market risk (independent variables) and financial performance (dependent variable). It highlights how these risk factors impact the profitability and stability of financial institutions. Credit risk arises from potential loan defaults, operational risk from internal inefficiencies, and market risk from external economic fluctuations. Understanding these interactions helps in analyzing their collective influence on financial performance, providing a foundation for risk management strategies and improving decision-making in financial institutions.

Independent Variable

Dependent Variable



Hypothesis

Credit Risk:

Credit risk is the proportion of non-performing loan on total loan. Credit risk in cooperatives means the chance of losing money when members or borrowers don't repay their loans on time. This can hurt the cooperative by increasing loan defaults, reducing available cash, and putting pressure on resources needed for daily operations and development. According to Alshatti (2015), keeping non-performing loans low can help improve financial performance, even though there may not be a strong direct link between credit risk factors like capital adequacy and loan loss provisions and financial results.

H1: Credit risk has a significant impact on the financial performance of cooperatives.

Operational Risk

Operational risk in cooperatives refers to possible losses caused by poor systems, process failures, human mistakes, or outside events. These risks can disrupt operations, damage member trust, and reduce the cooperative's financial performance and growth. Meshack (2016) found that good operational risk management is positively linked to better financial performance in cooperatives.

H2: Operational risk has a significant impact on the financial performance of cooperatives.

Market Risk:

Market risk in cooperatives is the possibility of financial loss due to changing market conditions like interest rates, exchange rates, or commodity prices. These changes can affect investments, pricing, and financial stability. Kolapo and Fapetu (2015) found through fixed-effect regression analysis that interest rate risks had very little effect on cooperative performance.

H3: Market risk has a significant impact on the financial performance of cooperatives.

Methodology

This research adopted a descriptive research methodology to assess the contribution of financial risks to the financial performance of cooperative in Nepal. The study was carried out by using 120 observations from the dataset of 12 cooperatives from mid-July, 2015 to mid-July, 2024. All the secondary data was collected from the cooperative's financial records and individual cooperatives financial statements. The data for each variable was organized into an Excel file for analysis. The study defined financial performance was the dependent variable, while credit, operational, and market risks were the independent variables. The secondary data collection sheet facilitated the compilation of data from published reports, management reports, and other organizational documents in alignment with the study's variable operationalization for the period 2015–2024.

Descriptive statistics, to use the means and standard deviations, were employed to summarize the data. Inferential statistics, including panel data regression, were used to examine the relationships among the variables. Data analysis was performed using SPSS 27 version, with the coefficient of determination providing insights into the

strength of these relationships. Hypotheses were tested to determine the nature, magnitude, and direction of the interactions. Results were presented using tables and model regression analysis was conducted to evaluate the analytical relationship between the factors. In total, 120 observations were analyzed, representing the cooperatives over the study period.

Research Model

This study used an econometric model to explore how good governance affects the profitability of cooperatives in Nepal. It looks at five main factors legitimacy, participation, professionalization, accountability, and transparency as the independent variables that may influence cooperative performance. The performance of the cooperatives is measured using an overall score that reflects how successful and efficient. The general regression model used to analyze these relationships can be specified as follows:

$$\text{Financial Performance} = \beta_0 + \beta_1 (\text{Credit Risk}) + \beta_2 (\text{Operational Risk}) + \beta_3 (\text{Market Risk}) + \varepsilon \quad \dots(1)$$

In the regression model mentioned above, the dependent variable is performance, measured by the average performance score. The study measurement the effects of credit risk, operation risk and market risk on financial performance of cooperative.

Results and Discussion

The study looked at three main financial risks credit risk, operational risk, and market risk as the independent variables, while financial performance was the dependent variable. Different methods were used to measure these factors. The research included 120 observations, covering an average period between mid-July, 2015 and mid-July, 2024. It also highlighted the average (mean), standard deviation, and the highest and lowest values of each measure.

Descriptive Analysis

Descriptive statistics summarized and explain the main features of a dataset, providing an overview of variables like credit risk, operational risk, market risk, and financial performance. Measure such as mean, standard deviation, and range highlight data distribution, variability and central tendency, aiding in understanding the patterns and drawing initial insights.

Table 1*Descriptive Statistics*

Variable	Mean	Std. Dev.	Min	Max
Credit Risk	.05072	.0428784	.0094	.2019
Operational Risk	.51652	.2887696	.0892	2.8027
Market Risk	.05771	.0384651	-.0911	.1542
Performance	.04352	.0299058	-.0576	.1199

The table 1 summarizes descriptive statistics for the variables Credit Risk, Operation Risk, Market Risk, and Financial Performance. The mean value of Credit Risk is 0.05072, with a standard deviation of 0.0428784, indicating moderate variability and values ranging from a minimum of 0.0094 to a maximum of 0.2019. Operation Risk has the highest mean at 0.51652, with a standard deviation of 0.2887696, reflecting substantial variability, and values ranging from 0.0892 to 2.8027, indicating some outliers. Market Risk has a mean of 0.05771 and the lowest standard deviation at 0.0384651, with values ranging from -0.0911 to 0.1542, showing less variability compared to other variables. Financial Performance has a mean of 0.04352, with a standard deviation of 0.0299058, and ranges from -0.0576 to 0.1199. This suggests that while Financial Performance is generally positive, some negative values indicate potential losses in certain instances. Overall, these statistics provide insights into the central tendency, spread, and range of the variables, which are understanding to their behavior in the context of the study.

Correlation Analysis

Correlation analysis looks at how strongly and in which direction the independent variables (credit risk, operational risk, and market risk) are related to the dependent variable (financial performance). It uses correlation coefficients to show how changes in these risks affect financial performance. This helps to understand how the risks are connected and supports better decision-making in managing those risks.

Table 2*Correlation Analysis*

Variables	Credit Risk	Operational Risk	Market Risk	Performance
Credit Risk	1			
Operational Risk	-0.0342	1		
Market Risk	-0.0209	-0.7508	1	
Performance	-0.0470	-0.7406	0.9628	1

The table 2 presents the correlation coefficients between credit risk, operational risk, market risk, and performance. Credit risk shows a very weak negative correlation with operational risk (-0.0342), suggesting that changes in credit risk have minimal impact on operational risk. Similarly, credit risk has a weak negative correlation with market risk (-0.0209), indicating a negligible relationship between the two. Operational risk, in contrast, shows a strong negative correlation with market risk (-0.7508), meaning that as operational risk increases, market risk tends to decrease significantly. Regarding performance, it has a very weak negative correlation with both credit risk (-0.0470) and operational risk (-0.7406), implying that higher credit or operational risks slightly hinder performance. However, performance exhibits a very strong positive correlation with market risk (0.9628), suggesting that better performance is strongly associated with higher market risk. This indicates that market risk has a more direct and significant impact on performance than credit or operational risks.

From the coefficients table, the following panel regression model was fitted in equation (1):

$$\text{Financial Performance} = -0.0095 + 0.0034(\text{Credit Risk}) + 0.0140(\text{Operational Risk}) + 0.7900(\text{Market Risk}) + \varepsilon \quad \dots(2)$$

The regression equation shows the relationship between financial performance and the three risk factors: Credit Risk, Operation Risk, and Market Risk. The intercept (-0.0095) represents the baseline financial performance when all risk factors are zero, although its practical relevance may be limited if such conditions are unrealistic. The coefficient of Credit Risk (0.0034) suggests that a unit increase in Credit Risk leads to a small increase in financial performance by 0.0034 units, holding other risks constant. Operation Risk has a slightly higher impact, with a unit increase improving financial performance by 0.0140 units. Market Risk exerts the most significant influence, with a unit increase enhancing financial performance by 0.7900 units, highlighting its

dominant role among the risk factors. This model provides insight into how these risks collectively and individually influence financial performance, emphasizing the critical impact of Market Risk.

Regression Analysis

Regression analysis evaluates the relationship between independent variables (credit risk, operational risk, market risk) and the dependent variable (financial performance). It identifies the magnitude and direction of each variable's impact, enabling a deeper understanding of how risks collectively and individually affect financial outcomes. This helps inform strategic decision-making.

Table 3

Regression Analysis

Variables	Coefficients	Std. Error	T	P- Value
Credit Risk	.0034	.0130	0.26	0.7971
Operational Risk	.0140	.0028	4.88	0.0000
Market Risk	.7900	.0244	32.36	0.0000
R Square	0.14			
Adjusted R Square	0.12			
SEE	0.25			
F Statistics	15.02			

Dependent Variable: Performance

The regression results presented aim to assess the impact of credit risk, operational risk, and market risk on the dependent variable, likely representing financial performance. The coefficient for credit risk is 0.0034 with a high p-value of 0.7971, indicating an insignificant and negligible effect, suggesting that credit risk does not meaningfully influence the dependent variable in this context. In contrast, operational risk has a positive coefficient of 0.0140 and a highly significant p-value (0.0000), implying that it has a statistically significant and positive effect on performance. Similarly, market risk demonstrates a strong and significant influence, with a large coefficient of 0.7900 and a p-value of 0.0000, highlighting its substantial role in explaining variations in the dependent variable. The model's R-square value is 0.14, meaning that only 14% of the variance in the dependent variable is explained by the three risk variables, which is relatively low. The adjusted R-square, which accounts for the number of predictors, is slightly lower at 0.12, indicating limited explanatory power. Despite this, the overall

model is statistically significant with an F-statistic of 15.02, and the standard error of the estimate (SEE) is 0.25, reflecting the average deviation of the predicted values from the actual values. These results suggest that while the model is statistically valid overall, its predictive strength is modest, and additional variables may be needed to enhance its explanatory power.

The hypothesis testing assess the significance of relationships between credit risk, operational risk, market risk, and financial performance. If the hypotheses are supported, it indicates that these risks significantly influence financial performance, either positively or negatively. This provides critical insights for improving risk management strategies

Table 4

Result of Hypothesis

Hypothesis	Variable	Coefficient	t-Statistic	p-Value	Significance	Results
H1: Credit risk significantly impacts performance.	Credit Risk	0.003	0.26	0.797	Not significant	Credit risk has no significant impact.
H2: Operational risk significantly impacts performance.	Operational Risk	0.014	4.88	0.000	Highly significant	Operational risk positively impacts performance.
H3: Market risk significantly impacts performance.	Market Risk	0.791	32.36	0.000	Highly significant	Market risk positively impacts performance.

The results of the hypothesis testing help explain how different risks relate to financial performance. Credit risk has a very small positive effect (coefficient of 0.0034), but this effect is not meaningful or statistically significant, as shown by a t-value of 0.26 and a p-value of 0.7971. This means credit risk does not have a real impact on performance in this case. On the other hand, operational risk has a coefficient of 0.014, meaning that if operational risk increases by one unit, financial performance goes up by 0.014 units. This relationship is very strong, as shown by a t-statistic of 4.88 and a p-value of

0.0000, meaning the effect is highly significant. In the same way, market risk has the biggest impact, with a coefficient of 0.7909. This means that when market risk increases by one unit, financial performance goes up by almost 0.79 units. This strong relationship is supported by a high t-statistic of 32.36 and a p-value of 0.0000. Overall, the results show that operational and market risks play an important role in improving performance, while credit risk has little to no meaningful effect.

The analysis shows that credit risk has a very small and statistically insignificant effect on the financial performance of cooperatives. With a coefficient of 0.0034 and a high p-value of 0.7971, it's clear that credit risk does not play a meaningful role in performance here. This is different from earlier studies like Alshatti (2015), which found that managing bad loans can improve performance. The small impact of credit risk in this case might be because these cooperatives have good loan recovery systems or fewer risky loans. Still, it's important to keep improving credit analysis and monitoring to prevent problems in the future.

On the other hand, operational risk has a clear positive impact on financial performance, with a coefficient of 0.014 and a p-value of 0.0000. This matches Meshack's (2016) study, which also found that managing operational risks helps cooperatives succeed. Since operational risk varies a lot, shown by its high standard deviation, improving internal controls and processes can greatly help boost performance. Cooperatives should focus on reducing human errors, fixing system problems, and handling outside disruptions to keep operations running smoothly and support growth.

Market risk has the strongest effect on financial performance among the three risks. With a coefficient of 0.7909 and a p-value of 0.0000, market risk has a very strong positive connection to performance. This agrees with Kolapo and Fapetu's (2015) research, which showed that market changes greatly affect cooperative success. Because market risk is so important, cooperatives need to use smart strategies to handle market ups and downs, like protecting themselves against interest rate changes and spreading out investments. By managing market risks well, cooperatives can improve financial stability and achieve long-term success.

Conclusion

The analysis concludes that credit risk has the insignificant impact on cooperatives performance. The P value of credit risk is 0.7971 which indicates that there is no any sufficient evidences in favor of research hypothesis. On the other hand, the regression coefficients of operational risk (0.0140) and the market risk (0.7909) are positive and statistically significant at 1% level of significance. The significant positive coefficients confirmed that market risk and operational risk both have the significant positive impact on cooperatives performance.

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Impact of Inland Tax Revenue and Import-Based Tax on GDP

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Abstract

This study explores the impact of inland tax revenue and import-based tax on Nepal's GDP, focusing on the relationship between fiscal policy and economic growth. Inland tax revenue includes income tax, value-added tax (VAT), and excise duty, reflecting the country's domestic revenue generation. In contrast, import-based tax, mainly customs duties, highlights Nepal's reliance on foreign trade for government income. Using data from 2018 to 2023, the study applies econometric methods to assess the connection between these tax types and GDP. The results show a positive correlation between both inland and import-based taxes with GDP, indicating that improved tax collection and effective trade management contribute significantly to national economic performance. However, the study also emphasizes the importance of balanced fiscal strategies avoiding overdependence on any single revenue source. Strengthening inland tax systems while maintaining efficient trade policies is essential for long-term stability and growth. These findings offer valuable insights for policymakers aiming to optimize tax structures and support Nepal's sustainable economic development.

Keywords: *Inland tax revenue, Import-based tax, GDP, Nepal, Fiscal policy, Economic growth, Econometric analysis.*

Introduction

The nexus between tax revenues and economic growth is a cornerstone of fiscal policy, especially in developing countries. Nepal, as a growing economy, relies heavily on its tax system to fund public services and drive development. This study delves into two primary sources of tax revenue: inland tax revenue and import-based tax. Inland tax revenue encompasses taxes collected within the country, such as income tax, value-added tax (VAT), and excise duty. In contrast, import-based tax primarily consists of customs duties on imported goods. This research aims to explore the impact of these tax

revenues on Nepal's GDP, providing a comprehensive understanding of their roles in the nation's economic landscape.

Inland tax revenue is critical for sustaining government functions and public investments. It forms the backbone of public finance, funding essential services like healthcare, education, and infrastructure. A well-structured inland tax system ensures a stable revenue flow, enabling the government to meet its expenditure needs without resorting to excessive borrowing. This section investigates the relationship between inland tax revenue and GDP growth in Nepal, using data from the past five years. The analysis highlights how effective inland tax collection can foster economic stability and growth, by providing a reliable source of funding for public projects and social programs.

Import-based tax, primarily derived from customs duties, is another vital component of Nepal's tax system. As a country with significant trade activities, Nepal's economy is influenced by international market conditions and trade policies. Import-based taxes not only generate substantial revenue but also play a crucial role in protecting domestic industries and regulating trade balances. This study examines the influence of import-based tax on GDP, analyzing recent data to understand the complexities of this relationship. The findings reveal how fluctuations in import-based tax revenues can impact economic growth, particularly in a country that depends heavily on foreign trade.

To assess the impact of inland tax revenue and import-based tax on GDP, this study employs advanced econometric techniques. Time-series data from 2018 to 2023 is analyzed using regression models to identify trends and correlations. The methodological framework ensures the robustness of the results, accounting for potential confounding variables and providing a clear picture of the causal relationships. This comprehensive approach allows for a nuanced understanding of how different tax components influence GDP, offering valuable insights into the effectiveness of Nepal's fiscal policies.

The study's findings underscore a positive relationship between both inland tax revenue and import-based tax with GDP. Efficient tax collection systems and balanced trade policies emerge as pivotal for fostering economic growth. The strong correlation between inland tax revenue and GDP highlights the importance of domestic resource mobilization. Meanwhile, the positive impact of import-based tax on GDP emphasizes the significance of trade in Nepal's economic development. These findings suggest that

well-crafted fiscal policies can optimize tax revenues and support sustainable growth. Policymakers are encouraged to continue refining tax systems and trade regulations to enhance economic resilience and prosperity.

Nepal's unique economic structure, characterized by its reliance on agriculture, tourism, and remittances, makes the effective management of tax revenues crucial for its development. Over the past five years, the country has undertaken significant reforms to broaden the tax base and improve compliance. These efforts have led to an increase in tax revenues, supporting public spending and economic growth. The positive trends observed in the study reflect the success of these reforms, demonstrating that a strong fiscal foundation is essential for Nepal's continued progress. This study provides a roadmap for future policy decisions, highlighting the importance of sustained efforts in tax policy and administration to ensure long-term economic stability and growth.

Review of Literature

Acharya (2025), the relationship between tax revenue and economic growth in Nepal is significantly influenced by the composition of tax sources. Inland tax revenue, which includes income tax, VAT, and excise duties, provides a more stable and predictable source of income for the government compared to import-based taxes. Acharya argues that inland tax is closely linked with the internal economic activities of the country, and its growth indicates improvements in domestic production, service expansion, and employment levels. On the other hand, import-based taxes, although contributing significantly to the revenue pool, are highly vulnerable to fluctuations in international trade, foreign exchange rates, and global economic conditions.

Shrestha (2024) explains that inland taxes like income tax and VAT are more reliable for Nepal's economy than import-based taxes. Inland taxes grow with local businesses and help the government invest in development. He points out that import taxes can be risky because they depend on international trade, which can go up or down. If Nepal depends too much on imports for income, the economy could suffer during tough global conditions. Shrestha suggests that the government should focus on increasing inland tax collection and making the tax system more efficient. This would help Nepal grow its economy in a stable and sustainable way.

Thapa (2024) points out that while import-based taxes bring in a large part of Nepal's revenue, they are not dependable for long-term growth. Since these taxes rely on trade and foreign goods, any drop in imports can reduce government income. Thapa explains

that this makes the economy vulnerable to global changes. He suggests that Nepal should focus more on inland taxes like income tax and VAT, which are more stable. Strengthening domestic tax collection will help the country become less dependent on imports and support steady GDP growth.

Ghimire (2023) highlights that Nepal's heavy reliance on import-based taxes can harm local industries and limit long-term growth. He explains that these taxes make imported goods more expensive, which can discourage local production and increase the cost of living. Ghimire argues that inland tax sources, like income tax and VAT, are more beneficial for the economy because they grow along with domestic business activities. He recommends that the government focus on improving inland tax policies to strengthen the economy and ensure steady growth in GDP.

K.C. (2023) explains that inland tax revenue plays a key role in building a strong and self-reliant economy in Nepal. He believes that taxes collected from inside the country, like income tax and VAT, are more stable and less affected by external factors. On the other hand, K.C. warns that import-based taxes depend on international trade, which can change due to global issues. He suggests that Nepal should improve its inland tax system, make tax collection more efficient, and reduce its reliance on import taxes to support long-term GDP growth.

Bhattarai (2022) states that depending too much on import-based taxes can create economic risks for Nepal. When imports fall, government revenue also drops. He argues that inland taxes, like income tax and VAT, are more consistent and can support the economy better. Bhattarai suggests that the government should invest in improving inland tax systems and encourage more domestic tax compliance. This would help increase national income and support steady GDP growth over time.

Ghimire, Y., & Bista, R. (2021). "The Role of Tax Revenue in Economic Growth: Evidence from Nepal." *Economic Journal of Nepal*, 44(3), 23-40. The study examines the impact of various tax revenues, including inland tax revenue and import-based tax, on Nepal's economic growth. The authors utilize time-series data from 2000 to 2020 and employ econometric models to analyze the relationship between tax revenue and GDP. Their findings indicate a positive and significant relationship between inland tax revenue and GDP, highlighting the importance of efficient tax collection systems. Additionally, the study finds that import-based tax has a moderate but positive impact on economic growth, emphasizing the role of trade in Nepal's economy.

Koirala, S., & Acharya, S. (2022). "Fiscal Policy and Economic Growth: The Case of Nepal." *Journal of Development Economics*, 15(2), 50-67. This paper investigates the effects of fiscal policy, particularly tax revenue components, on Nepal's GDP. The authors focus on the period from 2005 to 2021, using a combination of descriptive and econometric analysis. The study concludes that both inland tax revenue and import-based tax significantly contribute to GDP growth. The authors argue that enhancing tax administration and expanding the tax base are crucial for maximizing the benefits of tax revenues. Their analysis also points to the need for balanced trade policies to ensure sustainable economic development.

Adeoye, B. W., & Adewuyi, A. O. (2020). "Tax Revenue and Economic Growth in Sub-Saharan Africa: A Panel Data Analysis." *African Development Review*, 32(1), 21-35. This research explores the impact of tax revenue on economic growth across Sub-Saharan African countries, providing a comparative perspective that includes Nepal. Using panel data from 2000 to 2018, the authors employ fixed effects and random effects models to analyze the relationship between tax revenue components and GDP. The findings reveal that both inland tax revenue and import-based tax have positive and significant effects on economic growth. The study highlights the importance of robust tax policies and efficient tax administration in fostering economic development in developing countries.

Lee, Y., & Gordon, R. H. (2019). "Tax Structure and Economic Growth." *Journal of Public Economics*, 93(1-2), 74-82. This seminal paper investigates the relationship between tax structure and economic growth in a global context, including data from both developed and developing countries. The authors use a comprehensive dataset spanning from 1990 to 2015 and apply various econometric techniques to assess the impact of different types of tax revenues on GDP growth. Their results indicate that while both inland tax revenue and import-based tax positively influence economic growth, the magnitude of their impact varies across countries. The study suggests that developing countries, including Nepal, can benefit significantly from improving their tax structures and administration to boost economic performance.

These studies collectively underscore the importance of inland tax revenue and import-based tax in driving economic growth. At both the national and international levels,

efficient tax collection and well-structured tax policies are identified as key factors in fostering sustainable economic development. The literature provides a robust foundation for understanding the fiscal dynamics in Nepal and offers valuable insights for policymakers aiming to enhance tax systems and support economic progress.

Methodology

Research methodology involves the organized processes and methods used to gather, analyze, and interpret data to address particular research questions. The explanation follows below.

Sampling

For this study, data is sampled from the most recent five-year period, spanning from 2018 to 2022, to analyze the impact of inland tax revenue and import-based tax on Nepal's GDP. The sample includes data on inland tax revenue components (such as income tax, VAT, and excise duty) and import-based taxes (primarily customs duties). Key sources for this data include official reports from the Ministry of Finance, data from the Nepal Rastra Bank, and international databases such as the World Bank and IMF. These sources provide comprehensive and up-to-date information necessary for a thorough analysis.

The selection of this five-year period ensures that the study reflects the latest economic conditions and policy changes, providing a current and relevant picture of tax revenue dynamics. Data is collected through official publications, financial statements, and annual reports, and analyzed using econometric models to understand the correlation between tax revenues and GDP growth. This approach allows for a detailed examination of recent trends and the effects of fiscal policies on economic performance, ensuring that the findings are both accurate and actionable.

Data Collection and Methodology for Analysis

Data collection for this study involves sourcing detailed information on inland tax revenue and import-based tax from 2018 to 2023. Key data points include inland tax components such as income tax, VAT, and excise duty, as well as customs duties on imports. The primary sources of data are official reports from Nepal's Ministry of Finance, annual financial statements from the Nepal Rastra Bank, and international

economic databases like the World Bank and IMF. These sources ensure that the data is comprehensive and up-to-date, reflecting recent fiscal trends and economic conditions.

For the analysis, econometric models are employed to examine the relationship between tax revenues and GDP. Time-series regression analysis is used to identify correlations and assess the impact of inland and import-based tax revenues on economic growth. This methodology enables a detailed understanding of how changes in tax revenues influence GDP, controlling for other economic factors. By applying these techniques, the study aims to provide robust insights into the effectiveness of Nepal's tax policies and their role in supporting economic development.

Ethical considerations, including confidentiality and informed consent, were strictly observed to maintain research integrity. The multiple regression model, combining hypotheses 1 (H1) and 2 (H2), the equation is:

$$\text{GDP} = \beta_0 + \beta_1(\text{ITR}) + \beta_2(\text{IBR}) + \varepsilon \quad \dots(1)$$

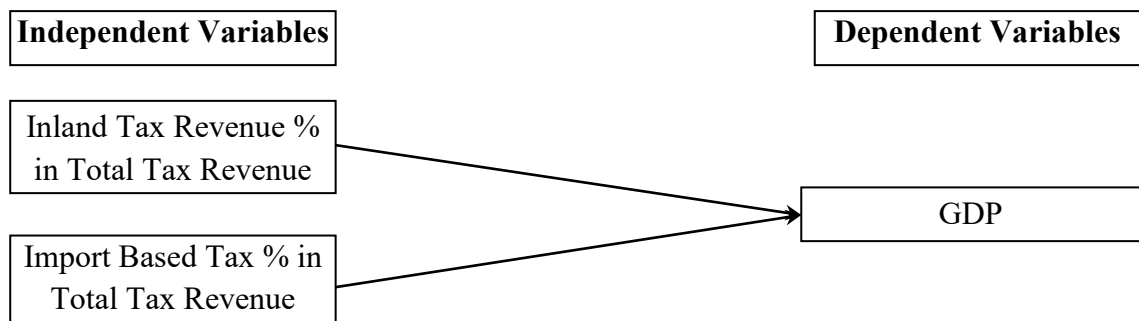
Where, ITR = Inland Tax Revenue

IBR = Import- Based Tax

GDP = Gross Domestic Product

Research Framework

This research framework outlines a detailed approach to examining the impact of inland tax revenue and import-based tax on GDP in Nepal. By analyzing the interactions between tax revenue components and economic performance, the framework aims to provide valuable insights that can enhance both academic understanding and practical policy applications. The study seeks to inform strategies for optimizing tax policies to support economic growth, offering guidance for policymakers and contributing to the broader economic discourse in Nepal.



Results and Discussion

To achieve its objectives, the study utilized secondary data from various sources, including government reports, financial statements, and international databases. The data encompassed information on inland tax revenue, import-based tax, and GDP from the past five years. This comprehensive dataset was sourced from official publications by the Ministry of Finance, the Nepal Rastra Bank, and other relevant institutions. By analyzing this secondary data, the study aimed to explore the relationship between inland tax revenue, import-based tax, and GDP in Nepal, providing insights into the impact of these tax revenues on economic growth.

Table 1

Trend and Growth of Tax Revenue (Amt in 10 million)

Details	2017/18	2018/19	2019/20	2020/21	2021/22
Total Tax Revenue	65949.15	73860.4	70005.55	87010.66	62790.47
Import Based Tax Revenue	31039.93	35528.57	29938.24	41880.4	34070.3
IBTR % in Total Tax Revenue	47.10%	48.10%	42.80%	48.10%	54.30%
Growth Rate of IBTR	-	14.49%	-15.73%	39.85%	-18.65%
Inland Tax Revenue	34909.22	38331.83	40067.31	45130.27	28720.17
ITR % in Total Tax Revenue	52.90%	51.90%	57.20%	51.90%	45.70%
Growth Rate of ITR	-	9.81%	4.55%	12.65%	-36.34%

Above table presents a detailed analysis of tax revenue trends and growth rates over the fiscal years from 2017/18 to 2021/22. The table reveals fluctuations in total tax revenue, import-based tax revenue (IBTR), and inland tax revenue (ITR), alongside their respective growth rates. Total tax revenue peaked at 87,010.66 in 2020/21 but dropped to 62,790.47 in 2021/22. Import-based tax revenue showed significant growth of 14.49% in 2018/19, but experienced a notable decline of 15.73% in 2019/20 before recovering by 39.85% in 2020/21, with a subsequent decrease of 18.65% in 2021/22. The percentage of IBTR in total tax revenue fluctuated, reaching a high of 54.30% in 2021/22. Inland tax revenue, conversely, increased by 9.81% in 2018/19 and 4.55% in 2019/20, and saw a substantial rise of 12.65% in 2020/21, but experienced a dramatic decline of 36.34% in 2021/22. The percentage of ITR in total tax revenue varied inversely with IBTR, peaking at 57.20% in 2019/20 and falling to 45.70% in 2021/22. These trends highlight the dynamic nature of tax revenue components and their impact on overall fiscal performance.

Table 2*Trend of GDP Growth Rate*

Details	2017/18	2018/19	2019/20	2020/21	2021/22
GDP(Annual Growth Rate%)	6.40%	5.50%	-4.10%	2.40%	3.90%

Above table illustrates the fluctuations in Nepal's GDP growth rate from 2017/18 to 2021/22. The data shows a steady economic performance with a growth rate of 6.40% in 2017/18, which slightly decreased to 5.50% in 2018/19. However, the following year, 2019/20, saw a significant contraction of -4.10%, reflecting the adverse impact of external and internal challenges, including the COVID-19 pandemic. The economy showed signs of recovery in 2020/21 with a growth rate of 2.40%, and further improved to 3.90% in 2021/22, indicating a gradual rebound from the economic downturn. These figures provide a clear picture of the economic volatility and recovery trajectory in Nepal over the specified period.

Table 3*Correlation Analysis between IRT, IBRT & GDP Annual Growth Rate*

	IBTR%	ITR%	GDP (Annual Growth Rate)
IBTR%	1		
ITR%	-1.000**	1	
GDP (Annual Growth Rate)	0.582	-0.582	1

** . Correlation is significant at the 0.01 level (2-tailed).

Above table analysis of Correlation Analysis between IBTR, ITR, and GDP Annual Growth Rate provides insights into the relationships between import-based tax revenue percentage (IBTR%), inland tax revenue percentage (ITR%), and GDP annual growth rate. The table shows a perfect negative correlation of -1.000** between IBTR% and ITR%, indicating that as the percentage of import-based tax revenue increases, the percentage of inland tax revenue decreases correspondingly. This inverse relationship is statistically significant at the 0.01 level. Additionally, the Pearson correlation coefficient of 0.582 between IBTR% and GDP annual growth rate suggests a moderate positive relationship, implying that higher IBTR% is associated with higher GDP growth rates. Conversely, the correlation of -0.582 between ITR% and GDP annual growth rate indicates a moderate negative relationship, suggesting that higher ITR% is linked to lower GDP growth rates. These correlations highlight the complex interplay between different tax revenue components and economic growth.

Table 4*Regression Result (IBTR: Independent Variable)*

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	23.448	1	23.448	1.537	.303 ^b
Residual	45.780	3	15.260		
Total	69.228	4			

a. *Dependent Variable: GDP (Annual Growth Rate)*

b. *Predictors: (Constant), IBTR%*

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-25.512	22.923		-1.113	0.347
IBTR%	0.589	0.475	0.582	1.240	0.303

a. *Dependent Variable: GDP (Annual Growth Rate)*

ANOVA and Coefficients Analysis examines the relationship between the percentage of import-based tax revenue (IBTR%) and the GDP annual growth rate. The ANOVA table reveals that the regression model has a sum of squares of 23.448 for the regression and 45.780 for the residuals, with a total sum of squares of 69.228. The F-statistic is 1.537 with a significance level of 0.303, indicating that the model is not statistically significant at the conventional levels, suggesting that IBTR% does not significantly predict GDP growth rate in this model.

The coefficients table further supports this finding, showing that the unstandardized coefficient for IBTR% is 0.589 with a standard error of 0.475, and the standardized coefficient (Beta) is 0.582. The t-value for IBTR% is 1.240 with a significance level of 0.303, which is not statistically significant. This implies that IBTR% does not have a significant impact on GDP annual growth rate based on this model. The constant term of -25.512, with a standard error of 22.923 and a significance level of 0.347, also suggests that the intercept is not significantly different from zero. Overall, the analysis indicates that, in this context, IBTR% is not a significant predictor of GDP growth.

Table 5*Regression Result (ITR: Independent Variable)*

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.448	1	23.448	1.537	.303 ^b
	Residual	45.780	3	15.260		
	Total	69.228	4			

a. *Dependent Variable: GDP (Annual Growth Rate)*

b. *Predictors: (Constant), ITR%*

Coefficients						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.415	24.743		1.350	0.270
	ITR%	-0.589	0.475	-0.582	-1.240	0.303

a. *Dependent Variable: GDP (Annual Growth Rate)*

ANOVA and Coefficients Analysis for the impact of inland tax revenue percentage (ITR%) on the GDP annual growth rate reveals a non-significant model. The ANOVA table shows that the regression sum of squares is 23.448, while the residual sum of squares is 45.780, with a total sum of squares of 69.228. The F-statistic is 1.537, and the significance level is 0.303, indicating that the model does not significantly predict the GDP growth rate. This suggests that ITR% does not have a statistically significant effect on GDP growth within the context of this analysis.

The coefficients table further supports this conclusion, where the unstandardized coefficient for ITR% is -0.589 with a standard error of 0.475, and the standardized coefficient (Beta) is -0.582. The t-value for ITR% is -1.240, with a significance level of 0.303, which is not significant. The constant term has a value of 33.415 with a standard error of 24.743, and a significance level of 0.270, also indicating it is not significantly different from zero. Overall, these results suggest that ITR% does not have a significant impact on GDP growth in this study.

Conclusion

This study aimed to examine the impact of inland tax revenue (ITR%) and import-based tax revenue (IBTR%) on Nepal's GDP growth. Analyzing data from fiscal years 2017/18 to 2021/22, the research revealed significant fluctuations in both IBTR% and ITR%, yet found that neither component has a statistically significant effect on GDP growth. The correlation analysis demonstrated a moderate positive relationship between IBTR% and GDP growth and a moderate negative relationship between ITR% and GDP growth. However, these relationships did not hold up under regression analysis, indicating that variations in tax revenue do not significantly drive GDP growth within the examined period.

The regression results highlighted that the models incorporating IBTR% and ITR% as predictors of GDP growth did not show statistical significance. Specifically, the F-statistics and p-values from ANOVA tests were not significant, and the coefficients for IBTR% and ITR% were statistically insignificant. This suggests that, while tax revenues are important for overall economic policy, their direct impact on GDP growth in the context of this study is minimal. The non-significant results imply that other economic variables or external factors might be more influential in determining GDP growth.

In light of these findings, the study underscores the need for policymakers to consider a broader range of economic factors when developing tax policies. While inland and import-based tax revenues are crucial for fiscal stability, their direct effect on GDP growth may be limited. Future research should explore additional variables that could impact economic performance, such as investment levels, consumer spending, and external economic conditions. By adopting a more comprehensive approach, policymakers can better understand the complex dynamics between tax revenue and economic growth, leading to more effective strategies for fostering economic development in Nepal.

Future Scope of the Study

The future scope of this study offers several promising avenues for further exploration to deepen our understanding of the relationship between tax revenues and economic growth in Nepal. One significant area for future research is to expand the analysis to include a more granular examination of different types of taxes and their specific impacts on various sectors of the economy. While this study focused on inland tax

revenue and import-based tax, other tax components, such as corporate tax, value-added tax (VAT), and excise duties, might have different effects on GDP growth. By employing a more detailed and segmented approach, researchers can uncover nuanced insights into how different tax instruments influence economic activities and growth rates. Additionally, incorporating a broader range of economic indicators and variables, such as investment levels, consumption patterns, and employment rates, could provide a more comprehensive understanding of the interactions between tax revenues and economic performance. Longitudinal studies spanning multiple decades could also reveal trends and patterns over time, offering a historical perspective on how tax policies and economic growth dynamics have evolved.

Another promising direction for future research involves a comparative analysis between Nepal and other countries with similar economic contexts. Such studies could help identify best practices and effective strategies that have been successful in different countries, providing valuable lessons for Nepal's tax policy development. By comparing Nepal's experiences with those of other emerging economies or countries with similar tax structures, researchers can gain insights into how different tax policies impact economic growth and stability. Furthermore, examining the effects of external factors, such as global economic conditions, trade policies, and international aid, could add another layer of understanding to how domestic tax revenues interact with broader economic trends. This comparative approach can also help policymakers in Nepal design more effective and context-specific tax policies that not only address current economic challenges but also foster long-term sustainable growth. Overall, these future research directions have the potential to significantly enhance our understanding of the complex relationship between tax revenues and economic growth, contributing to more informed and effective policy-making.

Implications of the Study

The findings from this study have significant implications for policymakers and tax authorities in Nepal. The lack of a significant impact of inland and import-based tax revenues on GDP growth, as observed in the analysis, suggests that tax policies alone may not be sufficient to drive substantial economic growth. This implies the need for a more integrated approach where tax policies are combined with other economic strategies, such as improving public investment, fostering private sector growth, and enhancing overall economic stability. Policymakers should consider these findings

when designing tax reforms and implementing strategies to ensure that tax revenues effectively contribute to broader economic objectives.

For academic research, this study underscores the importance of examining the complex interplay between various economic variables and their collective impact on economic growth. It highlights the need for further research to explore additional factors and refine econometric models to capture the subtleties of how different components of tax revenue influence economic performance. The study's results also point to the potential benefits of comparative analyses and longitudinal studies to better understand the dynamics of tax revenue and GDP growth in different contexts. This can help scholars and researchers develop more robust theories and practical recommendations for enhancing economic growth through effective tax and fiscal policies.

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Influence of Behavioral Aspects on Stock Investment Decision-Making

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Abstract

Investment decision making is a complex process influenced by psychological biases, especially in emerging markets such as Nepal, where financial literacy and market transparency remain limited. Traditional finance models assume rational investor behavior, but behavioral finance highlights the significant role of cognitive biases, such as loss aversion, overconfidence, herding, and risk perception, in shaping investment choices. This study examines the impact of these behavioral factors on individual investors in the Nepalese stock market. This study adopted a quantitative approach using a structured questionnaire distributed to 387 respondents. Descriptive statistics and multiple regression analysis were employed to explore the relationship between the independent variables (loss aversion, overconfidence, herding, and risk perception) and dependent variable (investment decision). The results reveal that loss aversion ($B = -1.416, p < 0.01$) and risk perception ($B = -1.362, p < 0.01$) negatively impact investment decisions, while overconfidence ($B = 0.947, p < 0.01$) and herding ($B = 1.723, p < 0.01$) have positive effects. Among these, herding has the strongest influence, indicating that social dynamics play a crucial role in investment behavior. These findings emphasize the need for targeted financial literacy programs to address cognitive biases and promote rational decision-making. Enhancing market transparency and access to reliable information can reduce emotional decision-making and improve market stability. This study contributes to behavioral finance literature by offering localized insights into investor behavior in an emerging market context.

Keywords: behavioral finance, loss aversion, overconfidence, herding, investment decision making

Introduction

Investment decisions in financial markets can be complex and are driven by multiple economic, psychological, and social factors. Many traditional finance theories, including the Efficient Market Hypothesis (EMH), posit that investors behave appropriately and utilize all available information to maximize returns (Ying et al., 2019). Recent studies in behavioral finance have questioned the rational investment paradigm and have emphasized the importance of such behaviors and emotions in investment decision-making (Sattar et al., 2020). These behavioral influences (such as loss aversion, overconfidence, herding behavior, and risk perception) are significant factors that affect investor behavior, especially in emerging markets such as Nepal, where financial literacy and market transparency are inadequate (Sapkota & Chalise, 2023).

Nepal's stock market is new and underdeveloped relative to its regional peers, yet it has expanded rapidly in recent years (Lamichhane, 2024). Originally established with the issuance of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937, this market has gradually become an important part of the country's financial system (Risal, 2019). Nevertheless, the market is still not without weaknesses, including a relatively low level of investor awareness, poor market liquidity, and a lack of an active risk-transfer mechanism (Shrestha, 2024). Moreover, the absence of credible information reinforces the tendency to employ heuristics and emotional stimuli instead of an actual analysis of investment strategies (Hossain & Siddiqua, 2022).

In developing economies, behavioral biases are frequently exacerbated by market conditions and socioeconomic situations (Cao, Nguyen, & Tran, 2021). For example, overconfidence can cause too much trading and a lack of portfolio diversification, whereas loss aversion causes investors to lose stocks longer than they should (Bouteska&Regaieg, 2020). Such herding behavior, induced by social pressure and the fear of missing out, amplifies market volatility and may result in speculative bubbles (Idris, 2024). In contrast, the environment comprising cultural and institutional factors significantly impacts the aforementioned behavioral patterns, warranting exploration of their subsequent impact on the decision-making processes of individual investors in Nepal (Risal & Khatiwada, 2019).

Behavioral finance provides a framework for studying how psychological biases affect investor behavior and market outcomes (Bhanu, 2023). While mainstream financial approaches based on rationality maintain that investors behave without bias, behavioral finance holds that decision makers are not merely logical providers but are also affected by cognitive traps and emotional biases. One of the key principles of the Prospect Theory is loss aversion, which indicates that investors experience the pain of loss more severely than the pleasure of similar amounts of gain (Gal & Rucker, 2018). This can lead to less-than-ideal decision-making, such as panic selling when the market is in a downward trend or holding onto losing stocks in the hope that they turn around (Kuramoto et al., 2024).

Another common bias is overconfidence, which occurs when investors overestimate their knowledge and forecasting abilities (Liu&Tan, 2001). Studies have found that overconfident investors trade more often than they would otherwise and, in doing so, incur transaction costs that reduce their returns. This behavior is particularly common among male investors, who are more likely to exhibit overconfidence than their female counterparts (Yang&Zhu, 2001).In Nepal, poor investment decisions due to overconfidence and limited knowledge of finance demonstrate the need for targeted financial literacy programs (Nepal et al., 2023)

Another important aspect in the context of the Nepalese stock market is herd behavior, that is, the tendency to follow the herd instead of performing an independent analysis (Sitaula & Uprety, 2024). This behavior is frequently motivated by the fear of missing out or a lack of understanding of market conditions, which causes investors to mirror the actions of other investors. Although herding can lead to temporary profits in bull markets, it heightens the potential for market bubbles to burst when investor sentiment shifts (Lu et al., 2024). Insights into the psychological basis of herding behavior are essential for creating policies that ensure excellent market stability and safeguard individual investors' interests.

Risk perception, defined as the subjective judgment of the uncertainty surrounding an investment, is another important determinant of investor behavior (Kurniawati et al., 2022). While objective measures of risk, such as standard deviation, do not change, risk perception changes based on individual experiences, emotions, and cultures. Moreover,

in the Nepalese context, where market volatility and economic uncertainty are quite high (Wagle, 2024), investors tend to follow conservative strategies or avoid the stock market altogether. In addition, improving market transparency and education will reduce biases, encourage more participation in the capital market, and increase investor confidence.

Although most of the literature on behavioral finance theory revolves around developed markets, empirical data on whether these correlations exist in emerging markets such as Nepal are scarce (Nareswari, Balqista, & Negoro, 2021). This is important for a richer understanding of investor behavior that addresses the local context, which is critical given the unique characteristics of the Nepalese market: gatekeeping, small size, lower institutional participation, and associated high reliance on retail investors. It is well documented that demographic characteristics such as age, education, and income level affect investment behavior (Ghimire, 2024). Herding behavior is more common among younger, less experienced investors, while older, more financially literate investors tend to be more risk averse (Rana, 2019).

Previous studies have also underscored the impact of macroeconomic indicators, including inflation, interest rates, and government policies, on investor sentiment and behavior (Adhikari et al., 2024). These external factors also magnify behavioral biases during times of high economic uncertainty in Nepal, which challenge investors in making rational decisions. Understanding how psychological biases and macroeconomic conditions interrelate is crucial for formulating effective interventions to pave the way for more informed investment behavior (Dhungana et al., 2023).

This study examines the influence of key behavioral factors—loss aversion, overconfidence, herding, and risk perception—on stock investment decision making in the Nepalese stock market. By identifying the psychological drivers of investor behavior, this study seeks to provide insights for policymakers, financial advisors, and individual investors. The findings contribute to the growing field of behavioral finance by offering a localized perspective on how cognitive biases affect investment decisions in an emerging market context. Ultimately, this study hopes to inform the development of targeted financial literacy programs and policy interventions that enhance market efficiency and investor well-being.

Review of Literature

Investment decisions are complex and are influenced by many factors, such as market conditions and company fundamentals. Theories within traditional finance include ideas such as the Efficient Market Hypothesis (EMH), which suggests that the market is efficient and that investors are rational in their decisions based on available information (Ying et al., 2019). By contrast, behavioral finance provides an additional view that seeks to understand the psychological biases and emotional factors that lead investors to behave in a manner other than rationally (Sattar et al., 2020).

Nepal's stock market is a nascent but fast-growing sector where it is necessary to learn about investor behavior. Despite its recent growth, the Nepalese Stock Exchange (NEPSE) is still prone to market volatility, information asymmetry, and investor awareness (Rana, 2019). Based on global trends with unique local characteristics, behavioral biases (e.g., overconfidence, herding, loss aversion, and risk perception) significantly impact investment decisions (Sapkota & Chalise, 2023).

Behavioral Factors Influencing Investment Decisions

Overconfidence Bias

Overconfidence bias is one of the most extensively documented cognitive errors in behavioral finance. Overconfident investors are often overconfident in their knowledge and predictive power, leading to high trading activity, which, on average, decreases a portfolio's performance by not meeting the market (Parhi&Pal, 2022). Yang and Zhu (2001) suggest male investors exhibit higher overconfidence (especially in ambiguous situations) and trade more, confirming gender differences and misjudgment under uncertainty.

There is empirical evidence of overconfidence in individual investors, who too often tend to trade based on their judgment and are not in line with the fundamental analysis of Nepal's stock market (Sapkota & Chalise, 2023). This generates transaction costs and entails higher risk for investors, progressively reducing long-term returns (Rana, 2019). Similar trends are observed in other emerging markets, such as Vietnam and Bangladesh, where overconfidence is a significant explanatory factor for speculative trading (Ngoc, 2014; Hossain & Siddiqua, 2022).

Herding Behavior

Herding behavior indicates an inclination toward follow other investors instead of making independent investment decisions (Qasim et al., 2019). This is most common during times of market uncertainty or extreme volatility. As Ayoub and Balwawi (2022) argues, herding behavior fuels bubble dynamics and bursts in the financial market, generating deleterious economic consequences.

In the case of Nepal, studies have shown that herding is common among retail investors, especially in bull markets (Risal & Khatiwada, 2019). Pathak et al. (2024) noticed that less-experienced investors are more susceptible to herding behavior, as they are motivated by fear of missing out (FOMO) and social pressure. Apart from exacerbating market volatility, this tendency further destabilizes the overall stability of the Nepalese stock market.

Loss Aversion and the Disposition Effect

A core component of Prospect Theory, loss aversion, posits that people intuitively feel the anguish of losses more strongly than the delight associated with an equal number of wins (Mallik et al., 2017). Such a bias generates the disposition effect, as investors stay with losing stocks longer but sell winning stocks too quickly to lock in gains (Gärling et al., 2017).

Loss aversion is a key determinant of investment behavior in Nepal (Pokharel, 2020). Loss-averse traders panic-additional during market downturns, amplifying price drops, and market instability. Owing to loss aversion and suboptimal portfolio management conditions, common portfolios in emerging markets cause lower returns (Ngoc, 2014; Rehan et al., 2021).

Risk Perception

Risk perception is a key aspect of the development of investment strategies. While objective risk measures such as volatility or beta exist, risk perception is subjective and influenced by past experiences, emotions, and cognitive biases (Munnukka et al., 2017). High anxiety leads to avoidance of certain strategies, while low anxiety leads to too-risky strategies.

According to Wagle (2024), owing to perceptions of high risk in stock investments, most Nepalese investors consider stock investments to be highly risky and prefer short-term liquidity (Wagle, 2024). Limited access to reliable market information and low financial literacy also fueled this perception of risk. Therefore, there is scope for more active targeting of investor education and market transparency to mitigate subjective risk perceptions in investment decisions.

Empirical Evidence from Emerging Markets

The financial systems of emerging markets present a unique environment for investigating behavioral biases, considering their native volatility, fast-paced economic shifts, and scant regulatory landscapes. In contrast to developed markets, where investor behavior is typically influenced by established financial practices, investors in these regions tend to exhibit stronger behavioral biases such as overconfidence, herding, and loss aversion, owing to high levels of information asymmetry and limited financial literacy (Saivasan & Lokhande, 2022; Cao et al., 2021). This overconfidence manifests as investors thinking they have better knowledge than others in the market, resulting in speculative trading and a surge in market volatility (Dhakar & Lamsal, 2023). For example, in Bangladesh, Hossain and Siddiqua (2022) find that frequent and riskier trading is motivated by overconfidence, with anecdotal rather than objective analysis of the mode of information processing, especially for retail investors. In a similar context, Ngoc (2014) discovered that overconfident investors affect the waves of the market in bullish periods in Vietnam, leading to unsustainable price increases. Another key bias, herding behavior, is entrenched in emerging markets, where the tendency to engage in imitation, especially in periods of uncertainty, creates bubbles and market crashes (Balcilar & Demirer, 2015).

Rehan et al. (2021) present evidence from Pakistan that herding is highest under optimistic conditions, primarily because of the irrational behavior of retail investors who do not have access to good data and instead follow the performance of others in the markets. The role of herding is also present in Sri Lanka, in which Kengatharan and Kengatharan (2014) stated that the inexperienced group of savers are the ones most affected by herding behavior, where the severity of herding behavior is not fully understood, leading to rash decisions that increase market volatility. Understanding the nuances of loss aversion, as articulated in Prospect Theory, is pivotal for investment

decision making, especially in emerging markets. Most investors are loss-averse (Hasan & Mustafa, 2023) — more sensitive to losses than to comparable gains, and tend to hold onto losing stocks in anticipation that they will recover and sell winning stocks prematurely.

Vijaya (2014) conducted a study in India and concluded that investors influenced by loss aversion and emotional biases often made suboptimal portfolio modifications, contributing to long-run wealth losses. In these markets, where subjective assessments of uncertainty frequently trump objective measures of risk (Munnukka et al., 2017), risk perception is also important. In Vietnam, macroeconomic factors (e.g., inflation and interest rates) are closely related to risk perception, while in Bangladesh, emotion triggered (e.g., fear and regret) is a strong determinant of cautious or speculative behavior (Cao et al., 2021; Hossain & Siddiqua, 2022). In addition, there is a shortage of financial education and a lack of scalability in the market, which makes it difficult for investors to make informed decisions.

Behavioral Finance in Nepal

The Nepalese stock market presents a unique environment for studying behavioral finance because of its relatively small size, heavy dependence on retail investors, and underdeveloped institutional infrastructure (Rana, 2019). Unlike its regional counterparts, NEPSE functions in a landscape marked by extensive information asymmetry, lack of strict oversight, and minimal investor safety—factors that markedly contribute toward cognitive biases and affective decision-making (Giri & Adhikari, 2023; Sapkota & Chalise, 2023). One dominating bias among Nepalese investors is the overconfidence bias, which is observed mainly in high-risk, low-return speculative trading among young and inexperienced investors who are oblivious about fundamental analysis but driven solely based on subjective judgment (Sapkota & Chalise, 2023). The proliferation of digital (online) trading platforms, which provide instant access to market transactions, has also exacerbated this tendency while enhancing the likelihood of relevant impulsive and excessive trading behavior. Mimicking others' actions without performing due diligence is also common in Nepal, particularly under exuberant market conditions, leading to herding behavior (Pathak et al., 2024; Rawat, 2023). During the growth phases, this behavior helps create artificial price hikes and bubbles, while in downturns, it causes panic selling and prolonged market downturns (Pokharel,

2020). In Nepal, individual demographic factors such as age, gender, education, and income strongly impact investment behavior. Cognitive biases, such as overconfidence and herding, are more prevalent in younger investors, whereas older and more experienced investors appear more conservative (Ghimire, 2024). Gender disparity also exists, where male investors are more confident than female investors, which is significant and in line with studies in other emerging markets (Barber & Odean, 2001; Poudel et al., 2024). Moreover, higher-income investors are more likely to take on risk, whereas lower-income investors emphasize short-term liquidity and seek to preserve capital (Adhikari, 2020; Rana, 2019). Market conditions and limited access to reliable information exacerbate this bias. During times of economic uncertainty, investors in Nepal tend to migrate toward safe, low-risk options, such as fixed deposits and government bonds, instead of lucrative long-term equity investments (Wagle, 2024). In addition, many investors, especially retail investors, overlook the factor of financial literacy and make decisions based on informal advice received from friends and family or through social networks, making them more prone to changing market conditions and misinformation (Sapkota & Chalise, 2023; Karki et al., 2024). These deficiencies lead to various problems in the financial market that can be mitigated through targeted intervention measures, such as improving market transparency, regulatory measures, and programs aimed at enhancing financial literacy through mainstream behavioral finance (Karmacharya et al., 2023). Reducing overreliance on short-term gains and encouraging long-term investment strategies can reduce the impact of loss aversion and herding bias.

Notwithstanding the increasing interest in behavioral finance, there are gaps in the literature on Nepal's stock market. First, most studies have focused on individual biases without investigating the interplay among demographic factors, market situations, and technological influences. Second, little is known about institutional investors, who are a significant force in market dynamics (Pathak et al., 2024).

Future research should encompass more comprehensive psychological, demographic and technological variables. An integrated effort will help us better understand investment behavior in Nepal against this backdrop. Exploring how learning about behavioral finance affects irrational decision-making can provide useful tips for economists and companies in the financial market.

Methodology

This study adopts a descriptive and causal research design to explore the influence of behavioral factors—herding, overconfidence, loss aversion, and risk perception—on individual investors' investment decisions in Nepal's stock markets. The quantitative approach focuses on analyzing the relationship between these independent variables and the dependent variable, which is the investment decision. A structured questionnaire was designed to collect primary data and to emphasize the key aspects of investor behavior and perceptions. Descriptive statistical tools, such as mean, standard deviation, and percentage, were used to summarize the dataset, while multiple regression analysis provided insight into the causal relationships between the variables. The target population for the study consists of individual investors with active DEMAT accounts in the Kathmandu Valley who participate in secondary market trading. A convenience sampling method was adopted, resulting in a sample size of 387 respondents, which was statistically sufficient for a reliable analysis. Google Forms was employed for data collection to maximize reach and efficiency, allowing respondents to complete the questionnaire conveniently without time or location constraints. The structured questionnaire included both multiple-choice and Likert-scale items, with the latter ranging from one (Strongly Disagree) to five (Strongly Agree).

Data were processed and analyzed using SPSS version 25. The demographic characteristics of the respondents were summarized using descriptive statistics, while regression analysis tested the hypothesized relationships between behavioral factors and investment decisions. Each behavioral construct was measured using scales validated in previous studies. Loss aversion, as described by Kahneman and Tversky (1979), captures heightened sensitivity to losses compared with equivalent gains. Overconfidence, derived from Barber and Odean (2001), reflects investors' tendency to overestimate their skills and knowledge, which often leads to excessive trading. Herding behavior, consistent with the framework of Bikhchandani and Sharma (2000), measures the extent to which investors mimic others' actions without independent analysis. Risk perception was assessed as the subjective evaluation of uncertainty and potential loss associated with investment choices following Slovic's (1987) approach. The dependent variable, investment decisions, reflects the respondent's actual investment behavior in the secondary market. A regression model was used to quantify the influence of these behavioral factors on investment decisions, expressed as

$$ID = \beta_0 + \beta_1 HB_1 + \beta_2 PA_2 + \beta_3 MS_3 + \beta_4 HEB_4 + e$$

Where, ID = Investment Decision

LA = Loss aversion

OC = Overconfidence

RP = Risk perception

HER = Herding

β_0 = Constant

β_1 to β_4 = Coefficient

e = Error terms

The coefficients (β_1 to β_4) estimate the strength and direction of the relationship between each independent variable and the dependent variable, while e accounts for the error term.

Cronbach's alpha was calculated to ensure reliability and validity, yielding a high internal consistency of 0.949 across the 25 items, indicating that the survey instrument was robust and reliable. This reliability score confirms that the items consistently measured the intended behavioral constructs.

Results and Discussion

Demographic Insights into Investment Participation and Behavior

The demographic analysis reveals key insights into investor characteristics and behavior. Female participants (51.4%) slightly outnumbered males, indicating a balanced gender representation in the investment landscape. Young adults aged 21–30 years dominate the age distribution (51.7%), reflecting a strong interest in stock markets among early career professionals. Education-wise, undergraduates lead at 49.9%, underscoring the growing financial literacy of students and recent graduates. Students represented the largest occupational group (40.8%), followed by business professionals (30%), indicating that investment activities are gaining traction among younger tech-savvy individuals. Most respondents (51.9%) had 1–5 years of experience, while 29.2% were newcomers with less than a year of experience, emphasizing the stock market's attraction to novice investors. Finally, the majority (59.7%) trade occasionally, suggesting a cautious and strategic approach to stock investment favoring long-term financial planning.

Table 1*Demographic Insights into Investment Participation and Behavior*

Demographic Variable	Category	Frequency	Percentage (%)
Gender Distribution	Female	199	51.4
	Male	188	48.6
Age Category Distribution	21–30	200	51.7
	31–40	109	28.2
	Above 40	43	11.1
	Below 20	35	9
Education Status Distribution	Graduate	117	30.2
	School Level	77	19.9
	Undergraduate	193	49.9
Occupation Distribution	Business	116	30
	Others	38	9.8
	Service	75	19.4
	Students	158	40.8
Investment Experience Distribution	1–5 Years	201	51.9
	Above 5 Years	73	18.9
	Below 1 Year	113	29.2
Frequency of Trading Distribution	Frequently	77	19.9
	Occasionally	231	59.7
	Rarely	79	20.4

Investment Decision-Making: Reliability and Behavioral Insights*Loss Aversion*

The results on loss aversion highlight that investors focus primarily on minimizing losses rather than maximizing gains. The highest mean score ($M = 3.39$) shows a strong preference for avoiding significant losses, whereas many investors expressed nervousness about large price drops ($M = 3.2$). The tendency to avoid increasing investments during market downturns ($M = 2.99$) further reinforces this cautious approach. Lower scores for holding declining shares while selling profitable ones ($M = 2.81$) and prioritizing capital preservation ($M = 2.57$) suggest a moderate overall level of loss aversion. These findings indicate that protecting existing capital is a dominant priority for investors, reflecting a conservative decision-making strategy under uncertain market conditions.

Table 2*Loss Aversion*

Loss Aversion	Mean	SD
Priority on avoiding significant losses over missing profits.	3.39	0.65
Nervous about large price drops in invested stocks.	3.2	0.69
Avoid increasing investment during market downturns.	2.99	0.68
Hold declining shares, sell those with a rise in value.	2.81	0.66
Prioritize preserving capital; fear losses more than missing profits.	2.57	0.67

Risk Perception

The risk perception results reveal that investors adopt a cautious approach, prioritizing stability. The highest mean score ($M = 3.4$) indicates minimal concern about missing certain gains, whereas significant caution is exercised regarding unexpected price fluctuations ($M = 3.23$). Hesitation to invest in historically underperforming stocks ($M = 2.99$) further emphasizes a conservative stance. Lower scores for avoiding emotional reactions ($M = 2.59$) and a lack of attraction to trading ($M = 2.78$) suggest mixed confidence levels. Overall, the findings point to moderate-to high-risk perceptions, with investors showing a clear preference for safer, more predictable investment opportunities.

Table 3*Risk Perception*

Risk Perception	Mean	SD
Unconcerned about capitalizing on certain gains in stocks.	3.4	0.64
Cautious about stocks with unexpected price fluctuations.	3.23	0.65
Concerns about investing in historically underperforming stocks.	2.99	0.69
Lack of attraction to the idea of trading in the stock market.	2.78	0.69
Assess investments holistically; avoid emotional reactions.	2.59	0.66

Overconfidence

The results for overconfidence indicate that investors exhibit moderate confidence in their investment decisions. The highest mean score ($M = 3.38$) suggests a strong belief in their own views over others, while a preference for independent decision making ($M = 3.2$) reinforces this self-assurance. However, lower mean scores for outperforming the market ($M = 3.03$), succeeding where others fail ($M = 2.81$), and valuing diverse

perspectives ($M = 2.57$) reflected a controlled level of overconfidence. This implies that, although investors trust their judgment, they remain open to external insights and learning opportunities, balancing self-assurance with cautious optimism.

Table 4

Overconfidence

Overconfidence	Mean	SD
Confidence in my investment views over others.	3.38	0.65
Independent decision-making without relying on others.	3.2	0.69
Certain about outpacing the stock market.	3.03	0.69
Success in environments where others fail.	2.81	0.67
Value diverse perspectives; be open to learning.	2.57	0.68

Herding

The findings reveal that herding behavior is moderately prevalent among investors. The highest mean score ($M = 3.39$) indicates that investment choices are often influenced by other investors' stock selections, followed by the impact of stock volumes on decisions ($M = 3.19$). Lower mean scores for quick responses to market fluctuations ($M = 2.8$) and resisting market trends ($M = 2.6$) suggest that while investors tend to follow market trends, they still maintain a level of independent decision-making. This demonstrates a balanced approach in which social cues play a role but complete reliance on market behavior is avoided.

Table 5

Herding

Herding	Mean	SD
Investment choices influenced by other investors' stock choices.	3.39	0.66
Impact of other investors' stock volume choices on decisions.	3.19	0.69
Decisions influenced by other investors' buying and selling choices.	2.98	0.68
Quick response to other investors' fluctuations and tracking their market responses.	2.8	0.67
Embrace independent decisions; resist market trends.	2.6	0.68

Investment Decision

The results on investment decisions highlight a strong preference for long-term holdings when buying shares ($M = 3.41$), suggesting that most investors prioritize stability and long-term growth. Trading based on speculative decisions follows ($M = 3.19$), indicating a moderate inclination toward risk taking. Lower mean scores for observing past stock behavior ($M = 2.79$) and staying informed about market trends ($M = 2.6$) reflect a limited reliance on historical patterns and market updates. This indicates that while long-term strategies dominate, some investors remain open to short-term speculative opportunities.

Table 6

Investment Decision

Investment Decision	Mean	SD
Preference for long-term holding when buying shares.	3.41	0.85
Trading based on speculative decisions.	3.19	0.87
No decision-making during investing.	2.98	0.86
Observing past stock behavior when making investment decisions.	2.79	0.86
Stay informed about market trends for timely choices.	2.6	0.85

Correlation

The correlation matrix provides insights into the relationships among Loss Aversion, Risk Perception, Overconfidence, Herding, and Investment Decisions. Loss Aversion and Risk Perception exhibited a strong positive correlation ($r = .841$, $p < 0.01$), suggesting that loss-averse individuals are likely to perceive higher risks. Overconfidence is positively correlated with both Loss Aversion ($r = .845$, $p < 0.01$) and Risk Perception ($r = .846$, $p < 0.01$), indicating that even confident investors exhibit traits of risk perception and loss aversion. Herding behavior demonstrated strong positive correlations with overconfidence ($r = .860$, $p < 0.01$), Loss Aversion ($r = .843$, $p < 0.01$), and Risk Perception ($r = .838$, $p < 0.01$), implying that herding tendencies coexist with these psychological traits.

Regarding Investment Decisions, Loss Aversion ($r = -.211$, $p < 0.01$) and Risk Perception ($r = -.210$, $p < 0.01$) showed significant negative correlations, indicating that higher levels of these traits discouraged proactive investment. Herding displays a weak positive correlation ($r = .171$, $p < 0.01$) with Investment Decisions, reflecting the influence of collective market behavior. Overconfidence has no significant relationship with Investment Decisions ($r = 0.08$, $p > 0.01$). Overall, these results underscore the nuanced interplay of psychological factors in shaping investment behavior.

Table 7

Correlation Matrix

Variables	Loss Aversion	Risk Perception	Overconfidence	Herding	Investment Decisions
Loss Aversion	1				
Risk Perception	.841**	1			
Overconfidence	.845**	.846**	1		
Herding	.843**	.838**	.860**	1	
Investment Decisions	-.211**	-.210**	0.08	.171**	1

N = 387 for all variables.

Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

Regression analysis revealed significant relationships between behavioral factors and investment decisions. A constant value of 3.302 represents the baseline level of investment decisions when all the predictors are held constant. Loss aversion ($B = -1.416$, $\beta = -1.053$, $t = -17.543$, $\text{Sig.} = 0.000$) and risk perception ($B = -1.362$, $\beta = -1.012$, $t = -16.984$, $\text{Sig.} = 0.000$) show significant negative effects, indicating that investors who prioritize avoiding losses or perceive high risk are less likely to engage in proactive investment behavior. Conversely, overconfidence ($B = 0.947$, $\beta = 0.717$, $t = 11.356$, $\text{Sig.} = 0.000$) and herding ($B = 1.723$, $\beta = 1.29$, $t = 20.863$, $\text{Sig.} = 0.000$) have positive effects, suggesting that self-assured investors and those influenced by collective market trends are more likely to make more active investment decisions. All predictors are statistically significant, emphasizing their crucial role in influencing investors' behavior.

Table 8*Coefficient of Regression*

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	3.302	0.119		27.711	0
Loss Aversion	-1.416	0.081	-1.053	-17.543	0
Risk Perception	-1.362	0.08	-1.012	-16.984	0
Overconfidence	0.947	0.083	0.717	11.356	0
Herding	1.723	0.083	1.29	20.863	0

Note: Dependent variable is Investment Decisions.

The hypothesis that loss aversion positively impacts investment decisions (H1) is rejected because of its significant negative effect ($B = -1.416$, $Beta = -1.053$, $p < 0.01$). This implies that individuals who focus on avoiding losses are less inclined to make proactive investment decisions. Similarly, H3, which proposes that risk perception positively affects investment decisions, is also rejected ($B = -1.362$, $Beta = -1.012$, $p < 0.01$), indicating that high-risk perception deters active engagement. By contrast, H2, positing that overconfidence positively impacts investment decisions, is accepted ($B = 0.947$, $Beta = 0.717$, $p < 0.01$), confirming that confident investors are more decisive in their actions. The strongest support is found for H4, where herding behavior positively influences investment decisions ($B = 1.723$, $Beta = 1.29$, $p < 0.01$), leading to acceptance. This underscores the significant role of social influence and collective behavior in shaping investment choices, particularly in emerging markets, such as Nepal.

The results of this study provide significant insights into the behavioral factors influencing investment decisions among individual investors in Nepal's emerging stock market. These findings confirm that, in some instances, they diverge from established behavioral finance theories and empirical research conducted in other emerging markets.

Loss aversion has emerged as a dominant factor, with investors displaying a strong preference for minimizing losses rather than maximizing gains. This aligns with Prospect Theory (Peng, 2025), which suggests that losses are more psychologically impactful than equivalent gains. In Nepal, the significant negative effect of loss aversion on proactive investment decisions ($B = -1.416$, $p < 0.01$) reinforces findings from prior

studies that highlight panic-selling and conservative strategies during market downturns (Pokharel, 2020). This behavior can exacerbate market instability, as observed in other emerging economies, such as India and Bangladesh (Vijaya, 2014; Rehan et al., 2021).

Risk perception also plays a crucial role in shaping investment strategies, with high-risk perceptions deterring active investment participation ($B = -1.362$, $p < 0.01$). Unlike objective measures of risk such as volatility or beta, subjective risk perception often leads to overly cautious approaches, especially in markets characterized by high uncertainty and limited information access (Ahmed et al., 2022). In Nepal, this heightened risk perception is further fueled by economic volatility and insufficient market transparency (Wagle, 2024). These findings are consistent with observations in other emerging markets, where subjective assessments of risk significantly influence investment behavior (Cao, Nguyen, & Tran, 2021).

Conversely, overconfidence positively influences investment decisions ($B = 0.947$, $p < 0.01$), confirming the hypothesis that self-assured investors are decisive and willing to engage in active trading. This aligns with research by Rana (2024), who find that overconfident investors tend to trade more frequently and often overestimate their knowledge and skills. In Nepal, overconfidence is particularly prevalent among younger investors with limited experience, mirroring the trends observed in studies of male-dominated investor groups in developed markets (Rana, 2024). This behavior, while potentially beneficial in fostering decisive action, can also expose investors to excessive trading risks and lower long-term returns.

Herding behavior demonstrated the strongest positive effect on investment decisions ($B = 1.723$, $p < 0.01$), emphasizing the role of social influence and collective behavior in shaping market trends. This finding is consistent with Shiller's (2000) argument that herding leads to speculative bubbles and heightened market volatility. In Nepal, herding is particularly prominent in bull markets, driven by the fear of missing out and limited access to reliable information (Pathak et al., 2024). Similar patterns are observed in Sri Lanka and Vietnam, where inexperienced investors are highly susceptible to social pressure and market trends (Ngoc, 2014; Kengatharan & Kengatharan, 2014).

The rejection of hypotheses related to loss aversion and risk perception highlights the need for targeted investor education programs that address emotional biases and promote rational decision-making. Enhancing financial literacy and market transparency could mitigate these biases, enabling investors to adopt more balanced strategies. On the

other hand, the acceptance of overconfidence and herding hypotheses underscores the importance of monitoring market sentiment and collective behavior. Policymakers and financial advisors must develop interventions that encourage independent analysis and long-term investment strategies to reduce reliance on short-term market cues.

Conclusion

Behavioral factors—loss aversion, risk perception, overconfidence, and herding—had a significant influence on investment decisions in Nepal’s stock market. Loss aversion and risk perception negatively affect proactive decision making, while overconfidence and herding encourage more active investment behavior. Herding emerged as the most influential factor, reflecting the role of social dynamics in collective decision making. These findings emphasize the need to address cognitive biases, especially in an emerging market such as Nepal, where limited information and high volatility amplify emotional responses. This study contributes to the behavioral finance literature by offering localized insights into investor behavior and underlines the importance of improving financial literacy and market transparency to promote rational decision making. Several strategies have been proposed to improve investment practices and enhance the market stability. First, targeted financial literacy programs should focus on reducing biases such as loss aversion and risk perception. Policymakers should enhance market transparency and provide better access to reliable information. Financial institutions should promote long-term investment strategies, while discouraging speculative trading. Monitoring herding behavior and developing early warning systems can help prevent market bubbles. Integrating behavioral insights into policy design will strengthen market resilience. Collaboration among regulators, financial institutions, and educational bodies is essential for building a more informed and rational investor base.

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Occupational Stress and Employee Performance

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Abstract

Employee performance is a crucial factor in achieving organizational success, as it significantly impacts productivity, profitability, and overall business outcomes. This study investigates the impact of occupational stress on employee performance at Nepal Telecom Ltd., focusing on four major predictors: working environment, workload, salary and benefits, and job security. The research aims to understand how occupational stress influences employee efficiency and organizational effectiveness in the telecommunications sector. Data were collected from 325 employees using a structured questionnaire and convenience sampling. The study used Pearson's correlation and regression analysis to evaluate the correlation between predictors and employee performance, revealing that working environment, workload, salary and benefits, and job security significantly positively impact employee performance at Nepal Telecom Ltd. A supportive work environment, balanced workload, competitive salary and benefits, and job security collectively enhance employee performance by fostering comfort, motivation, and focus while minimizing stress and anxiety. The study highlights the importance of managing occupational stress and recommends creating supportive work environments, balancing workloads, offering competitive compensation, and ensuring job security to optimize employee performance.

Keywords: *Employee performance, occupational stress, working environment, workload, salary and benefits, job security.*

Introduction

Stress has spread around the globe in the modern day and may be found in every job in different ways. In modern organizations, effective management plays a vital role in mitigating occupational stress and improving employee performance. Dar et al. (2011) argued that stress is the most extensive element among the numerous that affect employees' job performance. Sinkey (2024) confirmed that work place stress affects the performance at a greater extent and, it needs to be dealt with carefully. Further,

excessive stress wears a person out and causes them to underuse their energy resources, which is detrimental and has a long-term negative impact on employee performance. Wu et al. (2021) claimed that excessive levels of stress may lead to poor work morale, exhaustion, tardiness, absenteeism, and difficulties relating to coworkers or other team members. Because, stress is an organism's reaction to environmental demands or pressures.

Similarly, O'Connor et al. (2021) highlight that job stress arises when employees' professional expectations exceed their ability to handle job-related challenges, leading to negative emotional experiences. Further, Murali et al. (2017) emphasized that stress at work may originate from a variety of sources and impact individuals in different ways. Employees are often working longer hours in today's workplace since they have more duties and must work even harder to fulfill demands for their job performance (Daniel, 2019). Additionally, long working hours often increase pressure on employees, provoked by a challenging work environment, tight deadlines, and unclear guidance from managers (Kaur, 2023). Iskanto (2021) further confirmed that employee job stress is rising due to high turnover pressure and demanding workloads, which makes it more difficult for them to achieve their objectives. Shah (2023) identified various factors contributing to workplace stress, such as excessive workload, job insecurity, lack of control, and interpersonal conflicts. Therefore, Taheri et al., (2020) argued that stressors like these may lead to burnout, disengagement, and decreased work satisfaction, all of which have a negative effect on employees' performance.

Similarly, working environment is the crucial consideration while operating an organization. Therefore, employers should enhance workplace conditions to tackle factors that hinder productivity. Given that high levels of occupational stress can significantly impair employee performance, implementing effective stress management strategies is essential across various industries (Ehsan, 2019). Since, employee performance refers to the accomplishments of employees in completing their assigned tasks, based on their skills, competencies, and commitment to meeting deadlines. Many attempts are required to be made to enhance employee performance since it is crucial to the organization's ability to meet its objectives (Ahmad et al., 2018). Furthermore, it's critical to evaluate the impact of stress on employee performance and implement coping strategies to maintain stress at a tolerable level while maintaining positive effects (Sam et al., 2024).

In the context of Nepal Telecom Limited (NTL) in Karnali Province, a critical public utility provider, employee performance is vital for ensuring efficient service delivery. However, occupational stress, influenced by factors such as workload, job security, working environment, and salary and benefits, poses a significant challenge to employee productivity and satisfaction. While existing literature has examined various stressors, there is limited research on how these specific factors collectively impact employee performance, particularly in modern corporate environments where stress is prevalent. This gap is especially relevant for NTL, where operational efficiency relies heavily on employee well-being and performance. This study seeks to address this gap by investigating the integrated effects of workload, job security, working environment, and salary and benefits on employee performance within NTL. This study is significant as it offers actionable insights into managing occupational stress through supportive work environments, balanced workloads, and competitive compensation to enhance employee performance at Nepal Telecom, thereby improving service delivery and organizational efficiency. Therefore, it aims to provide insights into managing occupational stress to enhance employee productivity and organizational outcomes in this critical sector.

Review of Literature

Theoretical Review

Emerson (1976) state, social exchange theory remarkably highlights the significance of intimacy in social relationships and the reciprocation of intimacy within the process of social exchange. Pimpong (2023) clarifies that Emerson's social exchange theory suggests that organization's support boosts employee confidence, motivation, job satisfaction, commitment, and performance. Since, social exchange is the mutual appreciation and support between an organization and its employees, aimed at enhancing their overall well-being (Eisenberger et al.,1990).Social Exchange Theory (SET) justifies the contextual fit by illustrating how employee performance is influenced by reciprocal relationships and perceived fairness. In Nepal Telecom Ltd., occupational stress from imbalanced exchanges can be mitigated through mutual trust and equitable support, enhancing performance. Therefore, grounded in SET, this study explores the impact of stress from work environment, salary and benefits, workload, and job security, highlighting its relevance to organizational dynamics.

Empirical Review

Working Environment and Employee Performance

Research consistently highlights the positive correlation between working condition and employee performance. Ahmad and Khan (2019) examined the impact of work environment on employee performance, revealing that a positive work environment boosts performance, while poor conditions cause stress and decreased productivity. Correspondingly, Ollukkaran and Gunaseela (2012) found that a conducive work environment, including training facilities, monetary packages, rewards, safe working conditions, and job security, significantly influences employee performance and productivity. In a study of Nepalese commercial banks Goet (2022) found that job aids, teamwork, physical surroundings, and supervisor support significantly impact employee performance, highlighting the importance of these independent variables. In the same way, Pimpong (2023) explored the impact of work environment factors on employee productivity, focusing on employee commitment's mediating role. The study revealed a significant correlation between the work environment and employee commitment, suggesting that commitment partially influences the impact of the workplace on performance.

Similarly, Shammout (2021) found that factors such as employee benefits, supervisor support, training, workload, and physical work environment significantly positively impacted employee performance, highlighting the importance of a supportive workplace environment. Meanwhile, Zhenjing et al. (2022) identified that a positive workplace environment significantly influences employee task performance, particularly in terms of employee commitment and achievement-striving ability. This environment fosters higher levels of commitment and achievement-striving ability, which are crucial for improved task performance within organizations. In the meantime, Mainali (2022) conducted a study on community colleges' work environment practices, focusing on non-teaching faculty members, found that social and financial aspects significantly impact employee satisfaction, but the psychological environment needs improvement to enhance overall satisfaction. The study emphasizes the need for better understanding and improvement in these practices. The above literatures confirm the significant relationship between working environment and the employee performance. Consequently, the hypothesis is proposed that:

H_{A1}: Working environment significantly affects the employees' performance.

Salary and Benefits and Employee Performance

Studies constantly shows a strong correlation between salary and benefits and employee performance, with better compensation packages boosting motivation, job satisfaction,

and productivity. Naidu and Satyanarayana (2018) observed that employees respond positively to increased pay and benefits, leading to improved attitudes and productivity. The scholars recommend designing compensation systems that cater to both financial and psychological needs. Additionally, Sudiardhita et al. (2018) identified that compensation, work motivation, and job satisfaction positively impact employee performance, with higher compensation leading to increased job satisfaction and improved motivation, thereby enhancing performance. Similarly, Nugraha et al. (2024) found a strong correlation between salary and employee performance in Central Java, indicating that salary significantly influences employee productivity. Likewise, Reddy (2020) observed the effects of compensation on employee performance in an organizations, finding that it significantly influences talent attraction and retention. Competitive compensation packages attract better candidates and maintain higher employee satisfaction, according to the study. In the same way, Kadir et al. (2019) identified a positive correlation between compensation and employee performance, suggesting that fair and competitive remuneration boosts workforce productivity. However, the study found that these factors have a relatively low effect, with other factors potentially playing a more significant role. Nagaraju (2017) investigated positively impact of salary on employee performance, with significant differences in perceptions of salary and organizational climate factors between public and private sector banks, rejecting the null hypothesis that there was no significant difference. Furthermore, Zafar et al. (2021) examined the impact of compensation on job performance within Pakistan's public sector universities, revealing a significant positive relationship. Their findings highlighted salary as the most influential factor, demonstrating its substantial effect on enhancing employee performance. Additionally, Dong and Loang (2023) conducted the study at Shengshitongda, a Chinese logistics company, examined the impact of salary compensation on employee performance. The study identified key themes, emphasizing the need for a transparent and fair compensation system, which significantly influences employee motivation and performance. The reviewed literatures confirm a strong correlation between the working environment and employee performance. Therefore, the following hypothesis is proposed:

H_{A2}: Salary and benefits significantly affect the employees' performance.

Workload and Employee Performance

The research meaningfully highlighted the correlation between workload and employee performance. Briones, (2023) analyzed the impact of workload, work stress, and

motivation on workers' productivity in manufacturing setting, indicated that workload significantly influences productivity, while work stress and workload are crucial components of total productivity. Likewise, Juru and Wellem (2022) examined the impact of workload on employee job stress, performance, and job stress. The study indicated that workload significantly increased job stress, directly reduced employee performance, and had a significant negative impact on performance outcomes.

Similarly, Sudiardhita et al. (2018) found that workload indirectly impacts performance through work-life balance, suggesting that effective workload management can indirectly improve job performance by enhancing work-life balance. Correspondingly, Syihabudhin et al. (2020) observed that high workload negatively impacts employee performance, suggesting organizations should maintain a balance in workload to optimize performance. Consistently, Fan and Smith (2017) identified the relationship among workload, fatigue, and performance. The results indicated that high workload is a significant predictor of fatigue, and increased subjective fatigue negatively impacted performance across various cognitive tasks. Further, Ijie et al. (2021) explored the impact of workload on employee innovative behavior within the manufacturing sector in Nigeria. The study found that workload had a negative and significant impact on employee innovative behavior, indicating that higher workloads can hinder employees' ability to innovate. In the same way, Bruggen (2015) observed an inverted U-shape relationship between workload and employee performance, suggesting optimal performance is achieved at moderate workload levels, while low and high workloads lead to decreased performance. The literature review provides evidence of a significant association between the working environment and employee performance. Accordingly, the following hypothesis is formulated:

H_{A3}: Workload significantly affects the employees' performance.

Job Security and Employee Performance

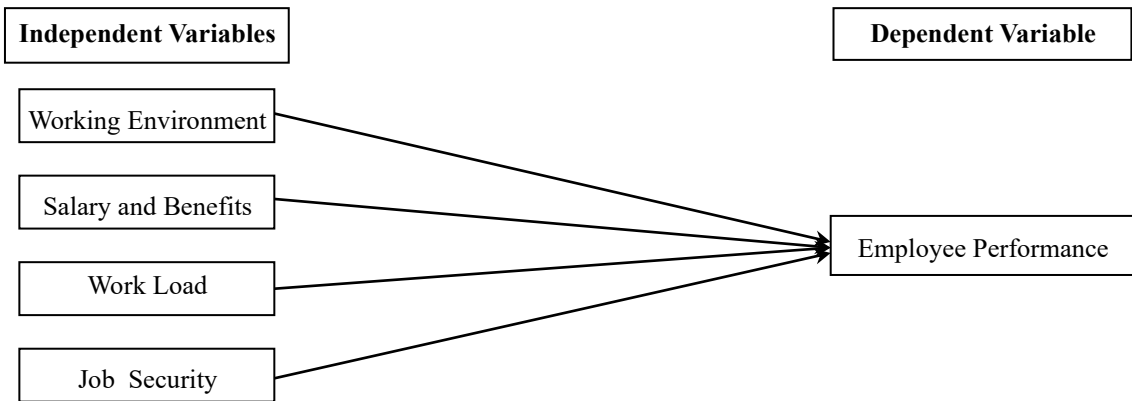
Literature firmly confirms that job security is an key indicator of employee performance. Owan and Andow (2022) identified the effect of job security on employee performance at Berger Construction Company in Nigeria indicating a positive and significant effect of job security on employee performance indicating that when employees feel secure in their jobs, their performance improves. Likewise, Chinyelu (2018) assessed the effect of job security on employee performance in Nigerian private sector. The research revealed that employees are more likely to work harder when assured of their job security, but a negative perception can reduce their ability to transfer

their knowledge and experience, leading to decreased performance. Similarly, Wahyuni et al. (2020) explored the impact of job security and organizational support on employee satisfaction and performance identifying that job security positively influences job satisfaction, while organizational support does not significantly affect job satisfaction. Job satisfaction does not mediate the effects of job security or organizational support on employee performance. In the same vein, Ahmed et al. (2017) found that employee job security significantly impacts employee performance and engagement. The study resulted that higher job security leads to improved performance as it allows employees to focus on their duties without job loss anxiety. Additionally, Sanyal et al. (2018) investigated a strong correlation between job security and employee performance and satisfaction in Oman, with a p-value of 0.012, indicating a significant relationship between job security and employee concerns about job loss. Furthermore, Nikolova et al. (2022) found that job insecurity affects employee performance at multiple levels. Individual employees' job insecurity within a team reduced adaptivity and task performance, while collective job insecurity increased supervisor-rated performance in adaptivity and proactivity but not task performance. Kumar (2019) also investigate the impact of job security on employee motivation and performance, specifically comparing union and non-union companies in Nagpur. The results indicated that the security offered by union participant organizations can be used as a predictor of increased job performance, and to some extent to the employee's behavior within the organization. Similarly, Imam and Javed (2019) found a positive correlation between job security, organizational support, and employee satisfaction on employee performance in the medical sector study in Punjab, Pakistan. Job security was identified to be positively related to employee satisfaction, while organizational support also positively influenced satisfaction. The study concluded that employee satisfaction mediates this relationship. The literature above proves a positive correlation between the working environment and employee performance. Consequently, the following hypothesis is proposed:

H_{A4}: Job security significantly affects the employees' performance.

Conceptual Framework

The conceptual framework offers numerous benefits to research projects, such as enabling researchers to define and establish their perspective on the subject being investigated (Grant & Osanloo, 2014). Therefore, the researcher has developed a systematic conceptual framework to guide the study, based on the overall pinning of proposed research constructs.

Figure 1*Conceptual Framework***Methodology**

This study employed a causal-comparative research design to investigate the impact of occupational stress on employee performance at Nepal Telecom Ltd. in Karnali Province. The research model incorporated key independent variables including working environment, salary and benefits, workload, and job security with employee performance as the dependent variable. To ensure the reliability and validity of the data, a set of structured questionnaires was developed in consultation with experts and by reviewing previous literature. The questionnaires were designed with two types of questions: multiple-choice questions with a close-ended format to gather the demographic profile of the respondents, and a five-point Likert scale to capture responses related to the study's main focus. Ethical considerations were strictly followed, with informed consent obtained from all participants, ensuring secrecy, and confidentiality throughout the research process. Convenience sampling technique was employed to collect the responses from the study area. Before distributing the questionnaires, respondents were asked to allocate time for completing them, after which the questionnaires were disseminated. A total of 350 questionnaires were distributed to employees across various branches of Nepal Telecom Ltd. in Karnali Province. Of these, 325 completed responses were received, yielding a response rate of 92.85 percent and exceeding the limit of (Hair et al., 2017). Cronbach's Alpha was used to evaluate dependability the data. To analyze the data and accomplish the goals of the research, both descriptive and inferential statistical techniques were used.

To assess the reliability of the data, Cronbach's Alpha was used. Both descriptive and inferential statistical methods were employed to analyze the data and meet the study's

objectives. The association between the independent and dependent variables was examined using correlation, while linear regression analysis was employed to determine the effects of the independent variables on employee performance. Additionally, the data were analyzed using SPSS version 25 was used.

Reliability and Validity

To evaluate the internal consistency or dependability of a collected of items and make sure they consistently measure the same construct, Cronbach's alpha has calculated.

Table 1

Status of Reliability Statistics

Construct's Name	Items contained	Cronbach's Alpha
Working Environment	6	0.826
Salary and Benefits	6	0.834
Work Load	6	0.864
Job Security	6	0.804
Employee Performance	6	0.879

Table 1 displays the reliability test results for each variable. The Cronbach's Alpha coefficients were as follows: working environment ($\alpha = 0.826$), salary and benefits ($\alpha = 0.834$), workload ($\alpha = 0.864$), job security ($\alpha = 0.804$), and employee performance ($\alpha = 0.879$), all indicating high internal consistency. Every variable has Cronbach's Alpha values above the generally recognized cutoff point of 0.70, demonstrating the consistency and dependability of the data. According to Christmann and Van Aelst (2006) and Griethuijsen et al. (2015), a reliability test threshold of 0.7 Cronbach's Alpha is frequently employed.

Content validity was used to make sure the research tool was valid. A literature analysis was conducted to identify essential constructs, including job security, workload, compensation and benefits, and working environment, which were then used to build pertinent items in order to assure the content validity of the questionnaire on occupational stress and employee performance. Additionally, opinions from professionals and specialists were taken into account to make sure the constructions were fully portrayed.

Results and Discussion

Demographic Profile of the Respondents

The survey conducted in 2024 captured various demographic characteristics of the respondents. The gender distribution was composed of 62.8 percent male and 37.2 percent female participants. Regarding age, respondents ranged from 18 to over 42 years old, with 11.7 percent aged 18 to 25, 64.3 percent aged 26 to 33, 20.3 percent aged 34 to 41, and 3.7 percent aged 42 and above. Marital status showed that 76.6 percent of respondents were married, while 23.4 percent were unmarried. Educationally, 9.2 percent of respondents had completed education up to the +2 level, 37.2 percent held bachelor's degrees, 50.5 percent had master's degrees, and the remaining 3.1 percent had qualifications beyond the master's level. These statistics provide a comprehensive demographic overview for further analysis.

Table 2

Demographic Profile of the Respondents

Demographics	Categories	Respondents	Percentage
Gender Status	Male	204	62.8
	Female	121	37.2
Age Status	18-25 years	38	11.7
	26-33 years	209	64.3
	34-41 years	66	20.3
	42-Above years	12	3.7
Marital Status	Married	249	76.6
	Unmarried	79	23.4
Educational Status	Up to + 2	30	9.2
	Bachelor	121	37.2
	Master	164	50.5
	Master above	10	3.1

Source: Survey Data, 2024

Inferential Statistics

As outlined in the research methodology, correlation analysis was employed to examine the interrelationship among the variables, while regression analysis was used to identify the impact of the independent variables (working environment, salary and benefits, workload, and job security) on the dependent variable (employee performance).

Table 3*Correlations Analysis of Independent and Dependent Variable*

		WE	SB	WL	JS	EP
WE	Pearson Correlation	1				
SB	Pearson Correlation	.614**	1			
WL	Pearson Correlation	.548**	.582**	1		
JS	Pearson Correlation	.582**	.428**	.434**	1	
EP	Pearson Correlation	.558**	.489**	.536**	.530**	1

** Correlation is significant at the 0.01 level (2-tailed), N =325(Job security (JS), salary and benefits (SB), work load (WL), working environment (WE)and Employee Performance (EP)

Source: Survey Data, 2024

Table 2 reveals the correlation analysis results examining relationships between key variables. The analysis revealed strong positive correlations between employee performance and each of the following factors: working environment, salary and benefits, workload, and job security. Obviously, all correlations are statistically significant at 0.01 level of significance securing strong relationship since p value is less than Alpha ($P < 0.05$) for all correlations.

Table 4*Model Summary of Regression Analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.661 ^a	0.437	0.430	0.46208	1.624

a. Predictors: (Constant), JS, SB, WL, WE

b. Dependent Variable: TEP

Table 3 shows the results of the multivariate analysis. The adjusted R^2 value (0.430) means that job security, salary and benefits, workload, and working environment together explain 43 percent of the variation in employee performance. The other 57 percent comes from factors which is not included in this study. The Durbin-Watson value of 1.624 indicates no autocorrelation, confirming independent errors, a key assumption for valid regression. The Durbin-Watson statistic (1.624) suggests no significant autocorrelation in the residuals, which is a good sign for the model's reliability.

Table 5*ANOVA*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	53.080	4	13.270	62.150	.000 ^b
Residual	68.325	320	.214		
Total	121.406	324			

a. *Dependent Variable: EP*

b. *Predictors: (Constant), JS, SB, WL, WE (Job security, salary and benefits, work load, and working environment) Level of Significance=0.05: N=325*

According to the ANOVA findings in Table 4, the F-test yielded a value of 62.105 and a corresponding result value of 0.000. This suggests that the employee performance of Nepal Telecom Ltd. in the Karnali provincial region and at least one independent variable have a substantial linear connection. The fitted linear model is valid, and we accept the alternative hypothesis at the 5% level of significance. This indicates that there is a positive and substantial linear link between employee performance in the research area and working conditions, workload, job security, and salary and benefits.

Table 6*Results of Linear Regression Analysis*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.431	.296		-1.459	.145		
TWE	.284	.084	.205	3.380	.001	0.476	2.102
1 TSB	.150	.079	.109	1.904	.038	0.536	1.866
TWL	.294	.065	.249	4.562	.000	0.591	1.692
TJS	.314	.064	.256	4.888	.000	0.641	1.561

Note: Working Environment (WE), Salary and Benefits (SB), Work Load (WL), Job Security (JS)

Source: Survey Data, (2024)

The results of an analysis using multiple regression are shown in Table 5. Employee

performance was the dependent variable in the research, whereas the independent factors were the working environment, pay and benefits, workload, and job security. The results of the study indicated that, at a 95 percent level of confidence and a 5 percent level of significance, the working environment strongly influences employee performance. With a p-value of 0.001, a t-value of 3.380, and an observed beta of 0.284, the results fall below the significance level ($\alpha=0.05$). The data indicates that a positive work environment raises performance in the studied area by 0.284 units.

However, the p-value is 0.038 and the observed beta value for salary and benefits is 0.150, t value is 2.904, and this is below the alpha significant threshold ($\alpha=0.05$). As a result, it is determined that the employee performance of Nepal Telecom in Karnali province is greatly impacted by their salary and benefits. The performance of employees in the studied area is closely linked to their salary and benefits. Likewise, the results identified that the observed p-value is 0.000, the t-value is 4.562, and the beta is 0.294, all of which are below the significance threshold ($\alpha = 0.05$). Because of this, we came to the conclusion that employee performance and workload have a significant strong relationship. Further data analysis reveals that employee performance levels rise by 0.294 units in response to an increase in workload.

In contrast, the research found for job security that the t-value is 4.888, and the beta is 0.314, and the p-value is 0.000, which are below the significant threshold ($\alpha = 0.05$). Tolerance (>0.1) and VIF (<10) values confirm no multicollinearity issues among predictors. Consequently, we inferred that there is a remarkable linear correlation between job security and employee performance within the research area. Job security is also demonstrated to have a substantial impact on employee performance.

Table 7

Summary of Hypothesis

Hypothesis No.	Results of Hypothesis	Accept or Reject Decision
H _{A1}	Working environment significantly affects the employee performance.	Accepted
H _{A2}	Salary and benefits significantly affect the employee performance	Accepted
H _{A3}	Work load significantly affects the employee performance	Accepted
H _{A4}	Job security significantly affects the employee performance	Accepted

This research investigated how occupational stress affects employee performance at

Nepal Telecom Ltd. (Karnali Province), analyzing four critical factors: work environment, salary and benefits, workload, and job security. The linear regression analysis revealed significant findings, offering insights into the relationships between these variables and employee performance.

Firstly, the working environment was found to have a significant positive effect on employee performance, confirming the first hypothesis (H_{A1}). This result aligns with studies by Ahmad and Khan (2019), Ollukkaran and Gunaseelan (2012), and others, which emphasize the importance of a supportive and conducive work environment in enhancing productivity. The questionnaire items related to the working environment, such as workplace safety, availability of resources, and interpersonal relationships, likely contributed to this outcome. Employees who perceive their work environment as positive and supportive are more motivated and engaged, leading to improved performance. This finding underscores the need for organizations to invest in creating a healthy and inclusive workplace culture.

Secondly, the analysis confirmed a significant positive relationship between salary and benefits and employee performance, validating the second hypothesis (H_{A2}). This finding is consistent with studies by Naidu and Satyanarayana (2018), Sudiardhita et al. (2018), and others, which highlight the role of fair compensation in motivating employees. The questionnaire items addressing salary adequacy, benefits satisfaction, and financial incentives likely influenced this result. Employees who feel adequately compensated are more likely to exhibit higher levels of commitment and productivity, as financial rewards serve as a key motivator. This suggests that organizations should regularly review and adjust compensation packages to align with employee expectations and industry standards.

Thirdly, the study found a significant linear effect of workload on employee performance, supporting the third hypothesis (H_{A3}). This result is consistent with research by Briones (2023), Dong and Loang (2023), and others, which indicate that excessive workload can lead to stress and reduced productivity. The questionnaire items measuring workload intensity, time pressure, and work-life balance likely played a role in this outcome. Employees facing unmanageable workloads may experience burnout, negatively impacting their performance. This highlights the importance of workload management and the need for organizations to implement strategies such as task prioritization, delegation, and flexible work arrangements to mitigate stress.

Finally, the analysis confirmed a significant positive relationship between job security and employee performance, validating the fourth hypothesis (H_{A4}). This finding aligns with studies by Owan and Andow (2022), Chinyelu (2018), and others, which emphasize the role of job security in fostering employee confidence and productivity. The questionnaire items addressing job stability, career growth opportunities, and organizational trust likely contributed to this result. Employees who feel secure in their roles are more likely to invest in their work and contribute to organizational goals. This underscores the importance of clear communication, transparent policies, and career development programs to enhance job security.

Conclusion

In conclusion, this study provides strong evidence that occupational stress, including working condition, salary and benefits, workload and, job security, significantly impact the performance of employee Nepal Telecom. Ltd Karnali province. The positive relationships established between these factors and employee performance confirms the study's hypotheses and align with prior research. These findings underscore the crucial role that managing occupational stress plays in enhancing employee productivity and organizational success. The results are strongly supported by Social Exchange Theory (SET), which emphasizes the importance of reciprocal relationships and perceived fairness in the workplace. The study demonstrates that a supportive working environment fosters mutual trust and equitable support, reducing stress and enhancing performance. Similarly, competitive salary and benefits, balanced workloads, and job security create a sense of fairness and stability, motivating employees to perform better.

The implications of this study suggest that employee of Nepal Telecom. Ltd Karnali province should prioritize strategies that manage the occupational stress to boost employee performance. By improving working environment, increasing salary and benefits, minimizing the workloads, and enhancing job security, Nepal Telecom. Ltd. can create an environment that maximizes employee engagement and productivity, ultimately leading to improved organizational success.

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Review Paper on the Methodological Choice for Assessing the Economic Contribution of Pilgrimage Site

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Abstract

Pilgrimage sites attract millions of people worldwide, driven by religious faith, and significantly stimulate economic activities. These sites create employment opportunities for hundreds of thousands people around the world, generate substantial income, and positively impact local business growth, contributing to overall economic prosperity and revitalization but remain in shadow in the absence of rigorous theoretical discussion to adopt appropriate methodologies to capture these aspects. This paper provides a precise theoretical and empirical review of literature on measuring the economic contribution of pilgrimage tourism around the world. It aims to deepen understanding of the theoretical underpinnings and empirical practices to explore potentiality of using Individual Travel Cost Method under revealed preference techniques to measure the economic contribution made by popular pilgrimage sites on national economy. In this context, the literatures for this review was traced from peer-reviewed journal articles, conference proceedings, books, and research reports that address the economic impact of pilgrimage tourism around the world. The key economic dimensions and indicators include visitors' satisfaction, consumers' satisfaction, employment generation, and local business growth.

Keywords: Pilgrimage tourism, economic contribution, employment generation, impact on local business growth and GDP

JEL Classification: L83, Z12, R11

Introduction

Pilgrimage tourism has long been a significant part of the global tourism industry, with the substantial growth of religious and spiritual journeys to sacred sites with the devotion of their religious belief around the world each year (El-Gohary et al., 2017; Ghimire, 2011). Essentially, this form of tourism encompasses both individual and group travel for purposes such as pilgrimage, and religious missionary work that has the potential to make substantial contributions to local and regional economies (Gulomjonovna & Sobirjonovna, 2019). In other words, pilgrimage sites with traditional rituals has positively impacted income generation, employment, business growth and economic prosperity, making it an essential factor in revitalizing the economy (Budovich, 2023, Ghimire et al., 2022; Gautam & Adhikari, 2016). Moreover, pilgrimage tourism, a subset of cultural and religious tourism, is gaining recognition for its potential economic impacts on local and national economies (Griffin & Raj, 2017; Collins-Kreiner, 2016; Pandey, 2016). In other words, the economic contributions of such sites extend far beyond spiritual fulfillment as they encompass employment generation, local business stimulation, and infrastructure development. In this context, it is pertinent to carry out precise review of theoretical and empirical literatures focused on measuring the economic contribution of pilgrimage tourism around the world. In this regard, the aim of this literature review is to deepen academic understanding of the theoretical underpinnings and empirical practices to explore potentiality of using Individual Travel Cost Method under revealed preference techniques to measure the economic contribution made by popular pilgrimage sites on national economy. Therefore, this paper provides a comprehensive review of related theoretical as well as empirical literature that assessed the economic contribution of pilgrimage tourism on the basis of non-market valuation techniques.

Methodology

This is a review paper to identify precise method to be adopted for measuring the economic contribution of pilgrimage sites on national economy. The literatures for this review was traced from peer-reviewed journal articles, conference proceedings, books, and reports that address the economic impact of pilgrimage tourism around the world. These sources were selected to ensure a comprehensive understanding of both theoretical and empirical perspectives on the topic. The study draws on academic databases such as Web of Science, Google Scholar, and JSTOR, analyzing global,

regional, and site-specific studies. The aim of the review paper is find basis for measuring economic contribution of pilgrimage sites on national economy based the earlier works around the world. Therefore, the primary focus of review is to locate and review the quantitative literature on the theme. But, for their cross validation, literatures on qualitative and mixed-method approach were also reviewed.

Choice of the Economic Valuation Methods for Contribution of Pilgrimage Sites

Pilgrimage sites tourism is a rapidly growing segment in the tourism industry of any country. This is offering significant economic, social, and cultural benefits to the society. It plays a critical role in attracting both domestic and international visitors. Despite its importance, a notable gap is visible in empirical studies that quantitatively measure the economic contribution of pilgrimage tourism to the local and national economy. Pilgrims reach to the pilgrimage destination covering long distance and incurring substantial expenditure for their spiritual satisfaction which is not directly measurable. This notion is called non-market activities and revealed preference technique is to be adopted to measure. In other words, the Travel Cost Method (TCM) is popular under revealed preference valuation technique in economic valuation. Essentially, these methods infer the value of non-market public goods (such as religious, cultural resources or environmental sites) based on people's actual behavior and choices in related markets. In this context using TCM in economic valuation becomes more precise as it derives values from observed actions rather than stated intentions. Therefore, a major research gap is methodology gap. In other words, so far no study is conducted using this method.

Travel Cost Method for Economic Valuation of Contribution of Pilgrimage Sites

The TCM is an economic valuation technique that is systematically used for utility analysis of behavioral microeconomics. Popularly it is used to estimate the recreational value of natural or cultural resources, such as pilgrimage sites, national parks, and heritage landmarks. Basically, it is underpinning on the idea that the money and time people spend to access a site can be used to estimate its monetary value. Primarily, Zonal Travel Cost Method (ZTCM) and Individual Travel Cost Method (ITCM) (Khan & Phukan, 2013) are two categories of TCM. ZTCM aggregates visitors based on geographic zones and estimates demand for the site by analyzing visitation rates from each zone. This method assumes people living farther incur higher travel costs, which

affects their visitation likelihood. ITCM analyzes travel costs and other variables at the individual level, rather than aggregating by zones. In other words, it allows for a more detailed analysis of individual visitor's preferences and behaviors. ITCM is based on the proposition that the value of a pilgrim site can be inferred from the amount of money and time people are willing to spend to visit it. The individual travel costs (for instance transportation, accommodation, entry fees) serve as a proxy for the price that visitors are willing to pay, allowing researchers to estimate the demand for the site. For religious sites, the ITCM can be used to assess the economic value that pilgrims and tourists place on their visit to these sacred places.

Theoretical Foundation

The paper is focused to explore potentiality of using non-market valuation techniques, particularly the ITCM, to assess the economic value that sacred sites generate on account of spiritual utility derivation from the specific site. Moreover, ITCM enables the estimation of the demand for pilgrimage sites, providing a valuable measure of their economic significance. In this context, ITCM's ability to model the relationship between individual travel costs and visitation frequency makes it ideal for understanding the economic contributions of these sites. Essentially, the travel costs, which include transportation, accommodation, and entry fees, serve as an approximation of what visitors are willing to pay for the pilgrimage experience. In this regard, key underlying theories under this include Consumer Demand Theory and Utility Maximization Framework. Essentially, Consumer Demand Theory is applicable to estimate visitors' willingness to pay for access to the site based on their travel costs. Similarly, Utility Maximization Framework is to be taken into consideration to assess how pilgrim visitors allocate time and resources to maximize their spiritual satisfaction from site visits. Estimating pilgrim visitors demand as a function of sacred site travel costs and socio-economic characteristics.

The theory surrounding the ITCM and its application is relatively convincing and straightforward. In fact, it is rooted in the microeconomic theory of consumer behaviour which states that an individual consumer maximizes his/her utility derived from the consumption of goods and services subject to budget constraints (Khan & Phukan, 2013). Marshallian demand function is utilized for the general solution of this constrained maximization. This analogy is extended to public goods and services such

as religious sites, public parks and other recreational services (Heidari et al., 2018). In this special case, a representative individual visitor/pilgrim to a religious site is thought of as a consumer of a marketable goods and non-marketable environmental goods or recreational goods and services, including pilgrimage sites (denoted as v_i) and all other private goods and services (denoted as x_i), who faces budgetary and time constraints (Nepal et al., 2018; Subedi, 2018, Subedi, 2017). Let's assume x_i and v_i to represent a vector of private marketable goods and a vector of a non-marketable public goods such as pilgrimage site respectively. Moreover, the prices of these two goods be p_x and p_v respectively. Essentially, the representative visitor or consumer can therefore spend his or her income (denoted as Y_i) on the purchase of these two set of private marketable goods and non-marketable public goods. Given the situation, the budget constraint of the individual pilgrim or visitor is given as:

$$Y_i = w T_w = P_x X_i + P_v V_i \quad \dots(1)$$

In the equation (1) above, Y stands for income level of the individual visitor. Likewise, w and T_w denote the hourly wage rate and the total number of hours worked respectively. The individual visitor/pilgrim also faces a time constraint as he/she must decide on how much time to spend on his work and leisure or recreation activity (Khan & Phukan, 2013). Similar to equation (1) above, the time constraint can then be stated as:

$$T = T_w + T_L \quad \dots (2)$$

In the equation (2) above, T , T_w and T_L denote the total time endowment of the visitor/pilgrim total time devoted to work and total time devoted to leisure (recreation) respectively. Obviously, it is to be noted that the pilgrims'/ visitors' choice visiting the site will dependent on quality of pilgrimage sites. If we denote q_i as the quality yardsticks of a pilgrimage sites, then the utility function of the representative pilgrim/visitors can be written as:

$$U_{ij} = U(x_i v_i q_j) \quad \dots(3)$$

Marshallian demand function for marketable private goods and non-marketable pilgrimage sites is estimated by maximizing the equation (3) subject to budget and time constrain represented by equation (1) and (2). Therefore, the ordinary demand functions of marketable private goods and non-marketable public goods or pilgrimage sites or spiritual utility goods are:

$$X_{ij} = U(P_x P_v Y_i q_j) \quad \dots (4)$$

$$V_{ij} = U(P_x P_v Y_i q_j) \quad \dots (5)$$

In the above equation (4) and (5) represent the ordinary demand functions of marketable private goods and non-marketable pilgrimage sites or spiritual utility goods, respectively. Likewise, Y_i is pilgrim visitors' income, and q_i is perceived quality of sacred site. However, demand function of the site is represented by equation (5). Obviously, it problematic to measure the flow of the spiritual utility or recreational services derived from non-marketable public goods or spiritual sites. Therefore, the number of trips of visits made by pilgrims to the pilgrimage sites or recreational site is used as surrogates or proxy. Essentially, equation (5) is vital to estimate the utility in terms of consumer surplus (CS) per trip. The corresponding coefficient is estimated employing appropriate econometric tool as considering the count data nature of dependent variable of this types of study.

Economic Impact Analysis (EIA)

Economic Impact Analysis is widely practiced method for assessing the economic contributions of tourism sites including pilgrimage tourism. It includes measuring direct effect, indirect effect, and induced effects of tourism on the economy of any country (Stynes, 1997). This can be presented in functional form as follows:

$$TEI = f(D_i, X_i, Y_i) \quad \dots(6)$$

In the equation (6), TEI, D_i , X_i , and Y_i denotes total economic impact, direct impact(immediate expenditures by tourists, such as spending on accommodation, food, transportation, and entry fees) indirect impact (secondary economic activities, such as the supply chain effects where businesses that provide goods and services to the tourism industry benefit), and induced impact (further economic activities generated when employees of businesses benefiting from direct and indirect impacts spend their earnings within the local economy) respectively. Thus, the total economic impact is a function of the direct, indirect, and induced effects, where each factor contributes to the overall economic contribution of the tourism site.

Input-Output Models

These models are also used to measure the economic impact of tourism by analyzing the interdependencies between different sectors of an economy. They help to quantify the

effects of tourist expenditure within the local economy, identifying sectors most affected by pilgrimage tourism (Dwyer et al., 2000). This concept can be expressed in functional form as follows:

$$Y = f(X_{1i}, X_{2i}, \dots, X_{ni}) \quad \dots(7)$$

In the equation (7), Y denotes total economic output by tourist visits, and X_{1i} , X_{2i} and X_{ni} denote different sectors of the economy (e.g., hospitality, transportation, retail, etc.) that are linked with Y. It quantifies the effects of tourist expenditure within the local economy, identifying which sectors are most affected by pilgrimage tourism.

Multiplier Effect Theory

This theory postulates that expenditure by pilgrims on food and beverage, accommodations, transportation, and religious services circulates within the local economy. This creates several economic benefits to local businesses and they reinvest earnings, create more jobs, and expand operations, further fueling economic growth (Domański & Gwosdz, 2010).

Spillover Effect Theory

This theory argues that the economic benefits of pilgrimage tourism spill over into other sectors, such as agriculture, retail, and local handicrafts, as local suppliers and businesses adjust to meet the demands of pilgrims of the sites. This also puts pressures on infrastructure improvements (roads, hospitals) provides benefit the wider population. Therefore, pilgrimage tourism promotes overall development the region by improving infrastructure that benefits both tourists and residents (Yang & Wong, 2012).

Cultural Capital Theory

This theory states that pilgrimage sites are cultural assets that generate economic value to the society through tourism. They attract visitors who contribute to the local economy by engaging with the region's traditions and practices. Therefore, this preservation of religious heritage sustains economic benefits while promoting cultural preservation (Clarke & Eastgate, 2011).

Butler's Destination Life Cycle Theory

This theory postulates the five stages of growth in pilgrimage destinations, from exploration to development, consolidation, and stagnation. This theory argues that

proper management ensures long-term economic sustainability by avoiding over-tourism and environmental degradation, benefiting the local economy through increased visit frequencies, investment, and infrastructure development (Lundtop & Wanhill, 2001).

Sustainable Development Theory

This theory suggests that pilgrimage tourism can boost economic growth. Hence, it must be managed sustainably to preserve environmental, cultural, and social assets. It also warns that over-tourism can harm local resources and diminish the pilgrimage experience. Therefore, it is essential to implement sustainable tourism practices to ensure long-term economic benefits to a society as a whole (Hole et al., 2019).

Cost-Benefit Analysis (CBA)

This approach compares the benefits of a tourism site to the costs incurred in maintaining it. In the context of pilgrimage tourism, it involves evaluating both tangible benefits of pilgrimage site (revenue generated, employment) and intangible benefits (cultural preservation). To measure the cost and benefit, contingent valuation method is widely used. The contingent valuation method estimates declared preferences for goods or services that are not traded on the market. It involves individuals estimating their willingness to pay (WTP) or willingness to accept (WTA) compensation for changes in the supply of a good or service. Despite having some limitations about their ability to accurately reflect cultural value, contingent valuation methods are consistent in estimating individual and social preferences. Therefore, public authorities caring for cultural heritage prefer CBA tool to rationalize a guideline for funding allocation or cultural assessment (Dwyer, 2012).

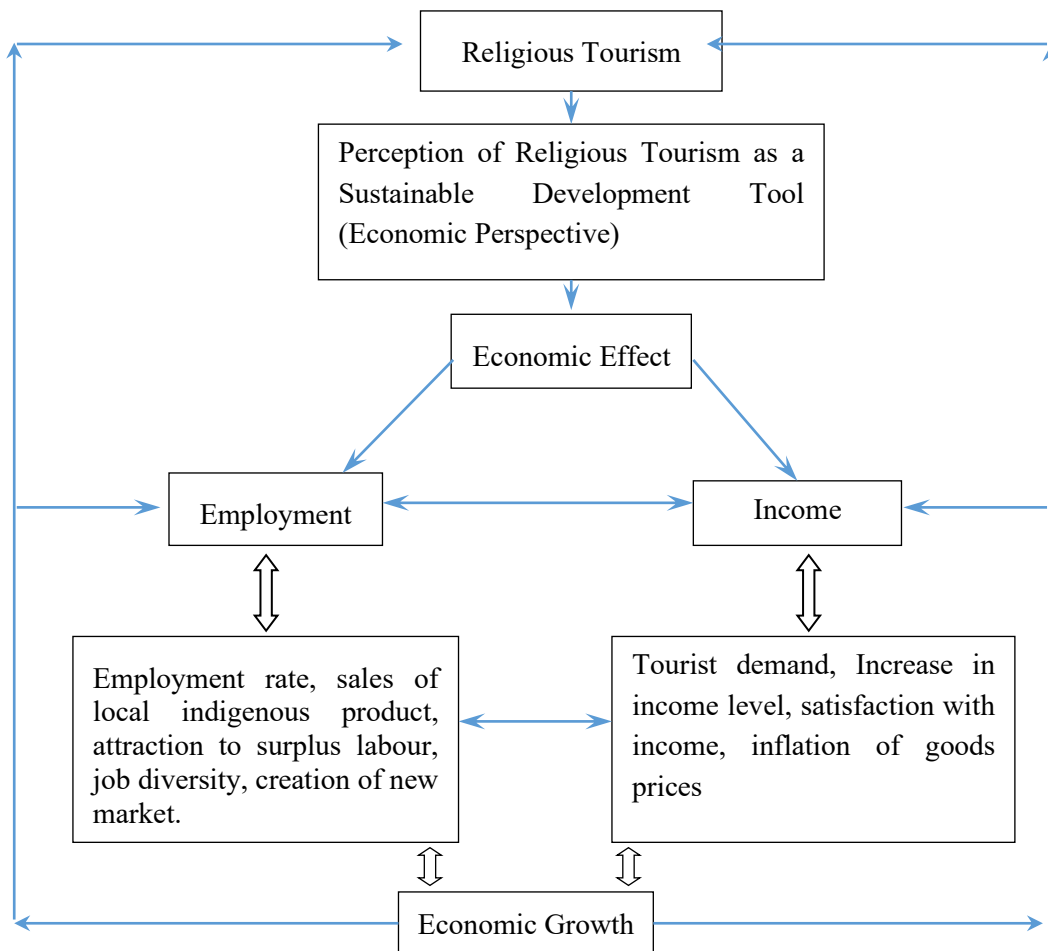
To sum up, in the absence of an accurate estimation of the spiritual value of pilgrimage site, decision-making relating to the budget allocation and management of the religious sites may be incomplete. However, estimating the economic value of spiritual and religious services is not straightforward as these services are subjective, intangible and beyond the normal valuation techniques. Moreover, there is a dearth of literature on the valuation of pilgrimage sites having immense spiritual and religious values. Therefore, this study attempted to fill this methodological gap. In this regard, this proposed methodological framework is expected to provide better insight for examining how the benefits pilgrimage tourism can be assessed and measured to harness for overall economic development by addressing challenges such as over-tourism, environmental degradation, and local community concerns and so on.

Conceptual Framework

The construction of a theoretical framework for the above mentioned topic involves integration of various themes such as tourist flow, economic activities, and sustainability theories to explain how pilgrimage tourism drives economic development, what factors influence its outcomes, and what aspects must be addressed to maximize positive impacts and control adverse effect. The semantic chart of Figure 1 below visualizes potential conceptual framework for the assessment of economic contribution of popular pilgrimage sites on national economy (Budovich, 2023). Therefore, as a synthesis of above review, conceptual framework of this types study can be proposed as follows:

Figure 1

Economic Effect of Religious Tourism



Empirical Literatures on Economic Contribution of Pilgrimage Site

Pilgrimage tourism has emerged as an important driver of economic growth in many countries, particularly the counties with rich religious and cultural heritage. In any economy religious tourism plays a critical role in supporting the national economy attracting millions of visitors annually from the world. This empirical review is intended to identify the appropriate method to measure the economic contributions of the pilgrimage sites of any country. This endeavor is made to seeks to fill a critical gap in the literature. Therefore, the findings are expected to provide valuable insights for the policymakers and tourism stakeholders to measure economic benefits of the site, enabling them to develop targeted strategies that promote sustainable tourism and enhance the economic benefits for local communities. In this regard, this empirical review tries to summarize the empirical literatures. They are summarized hereunder:

Khan and Phukan (2013) explored the economic assessment of cultural tourism in India using the travel cost method. They used a technique that estimates economic value based on the expenses incurred by visitors to visit the cultural sites. The study underscored that the approach is particularly relevant in the context of India's rich cultural heritage, which attracts multi-million tourists seeking immersive cultural experiences in various cultural sites. The study emphasized the economic significance of cultural tourism and its potential to contribute to regional development. They concluded that the approach aligns with the broader trends in cultural tourism, which is increasingly recognized for its role in economic growth and cultural preservation.

Gautam and Adhikari (2016) examined Pashupatinath Temple site's direct and indirect economic contributions that included employment and local business growth, providing a foundational empirical study specific to the research topic. They highlighted the need for improved infrastructure to support growing tourism demand.

Nepal et al. (2018) estimated annual average use value of cultural services in the Kailash Sacred Landscape area, over 22.6 million US dollar, accounting for over 7 percent and 15 percent of the per capita income of Nepalese and Indian households, respectively.

Dwyer et al.(2019) used input-output (I-O) models to measure tourism's economic impact and demonstrated how external economic shocks, like the financial crisis, influence tourism-dependent economies. The study serves as a foundation for measuring direct, indirect, and induced effects of tourism expenditures.

Ghimire and Bhattarai (2020) used primary survey data as empirical evidence to assess impact of pilgrimage tourism on local employment and revenue generation in rural areas of Nepal. The study underscored the importance of sustainable tourism practices to maximize long-term economic benefits.

Bhattarai et al.(2021) investigated the impact of tourism on employment generation and foreign exchange earnings in Nepal. The findings indicated that tourism significantly contributes to job creation in general and hospitality and services in particular. In addition, tourism serves as a crucial source of foreign exchange, thereby supporting favorable balance of payment Nepal's economy by providing essential foreign currency inflows. The study also emphasized the potential of further developing the tourism sector to enhance economic growth and stability.

Rana and Poudel (2021) examined the economic contributions of religious tourism in Lumbini using a combination of expenditure analysis and multiplier effect theory. Their findings showed the strong economic linkages generated by tourist expenditure on local goods and services.

Kunwar and Thapaliya (2021) conducted a preliminary assessment of the socio-economic impacts of Barahachhetra pilgrimage site on the local community, focusing on aspects like employment generation, local business development, and infrastructure growth. The study also highlights the challenges faced by the residents of the area, including inadequate infrastructure, environmental degradation, and lack of proper management hampering hinder its potential for sustainable tourism development.

Gautam (2023) explored the relationship between religious tourism and entrepreneurship, selecting the study sit the Manakamana Temple in Nepal. It examined how the religious site can drive local economic development by enhancing entrepreneurial activities. The study highlighted the challenges and opportunities provided by the site and suggested to optimize the socio-economic benefits of religious tourism.

Merciu et al. (2021) used the zonal travel cost and the individual travel cost methods to account the economic contribution of religious sites. The study concluded that the demand for a cultural heritage site is inversely correlated to the travel costs and distance. Moreover, the results reflected that the demand also depends on other factors, such as the satisfaction level of the tourist experience and tourists' income and motivations. The study emphasized the robustness of the travel cost method to gauge the

value of cultural sites and the asserted significance of conservation process in the current context.

To sum up, this theoretical framework provides a complete understanding of religious tourism by integrating existing theories relating from tourism studies. It explores both the significance of pilgrimage tourism and its contribution on the local economy, culture, and environment. The empirical literature review provided insight on how pilgrimage tourism is found to be contributing to the economy. Likewise, it also highlights the role of direct, indirect, and induced economic impacts while emphasizing the importance of cultural preservation, sustainability, and the relationships between various stakeholders. Better understanding of these aspect has provided researcher to capture all maximum aspects of the economic benefits of pilgrimage tourism through this proposed study.

Empirical Model Specification

Based on the discussion of above theoretical, the researcher has come made empirical model for the study. In other words, to apply the TCM to religious tourism, such as a pilgrimage site in Nepal, we can express the relationship between the number of visits and travel costs in both functional and econometric forms. The functional form of the model reflects the general relationship between the number of visits in sacred site which is regarded demand of sacred site and travel costs, along with control variables that determines the frequency of visits.

Empirical Model Specification

Nepal et al. (2018) has specified a functional form for the estimation of economic benefits derived from pilgrimage site based on travel cost method, to estimate the relationship between the visit frequency at spiritual site and the travel costs associated with visit. The functional form the above analogy is given in equation (8) below. Therefore, a simple linear econometric model could be specified as:

$$V_i = \alpha + \beta_1 TC_i + \beta_2 ATC_i + \beta_3 HH_{i1} + \beta_4 Ed_{2i} + \beta_5 Ag_i + \beta_6 FS_i + \beta_7 UR_i + \varepsilon_i \quad \dots(8)$$

Where, α = Intercept term.

$\beta_1, \beta_2, \dots, \beta_7$ = Coefficients to be estimated.

V_i = Number of visits made by i^{th} individual Pilgrims (dependent variable).

TC_i = Travel costs incurred by i^{th} individual Pilgrims.

ATC_i = Potential Travel costs for alternate sacred site for i^{th} individual Pilgrims.

HH_i = Income of i^{th} individual Pilgrims

Ed_i = Education level of i^{th} individual Pilgrims.

Ag_i = Age of i^{th} individual Pilgrims.

FS_i = Family size of i^{th} individual Pilgrims.

UR_i = Urban /Rural Residence of i^{th} individual Pilgrims.

ε_i = Error term capturing unobserved factors affecting the number of visits.

The model given as equation (8) assumes that the number of visits decreases as travel costs increase, i.e., $\beta_1 < 0$, implying a negative relationship between travel costs and the number of visits.

Log-Linear Model

Log-linear model given in equation (9) can be used to handle potential non-linear relationships between the number of visits and travel costs (Nepalet al., 2018). The log of the number of visits can be taken to estimate a percentage change:

$$\ln(V_i) = \alpha + \beta_1 \ln TC_i + \beta_2 \ln ATC_i + \beta_3 \ln HH_i + \beta_4 \ln Ed_i + \beta_5 \ln Ag_i + \beta_6 \ln FS_i + \beta_7 \ln UR_i + \varepsilon_i \dots (9)$$

Where, \ln = Log transformation

α = Intercept term.

$\beta_1, \beta_2, \dots, \beta_7$ = Coefficients to be estimated.

V_i = Number of visits made by i^{th} individual Pilgrims (dependent variable).

TC_i = Travel costs incurred by i^{th} individual Pilgrims.

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FS_i = Family size of i^{th} individual Pilgrims.

UR_i = Urban /Rural Residence of i^{th} individual Pilgrims.

ε_i = Error term capturing unobserved factors affecting the number of visits.

This log-linear form helps when the impact of travel costs on visits is expected to be non-linear (small increases in costs may lead to larger percentage decreases in visits).

Estimating the Consumer Surplus

Garrod and Willis (1999) proposed the analogy of estimating consumer surplus as the consumer satisfaction derived from non-marketable public goods. In this regard, the coefficient of travel cost given in equation (9) above is crucial for assessing social welfare gain (Nepalet al., 2018) from non-marketable public goods. It is worth noting that estimation of consumer surplus is crucial for assessment of social welfare gain in economic valuation technique. which is given by:

$$CS = \frac{-1}{\beta_{TC}} \times \text{Total Number annual Pilgrim visitors} \quad \dots(10)$$

In equation (10), β_{TC} coefficient of travel cost which bears negative sign and quotient of negative one divide by negative β_{TC} will be positive. The quotient is regarded as mean consumers surplus. Finally, this consumer surplus to be multiplied by total annual pilgrims to estimated social welfare gain. Hence, this calculation provides an estimate of the economic value (benefit) that visitors derive from visiting the religious site beyond their actual expenditure.

Discussion on the Appropriateness of the Individual Travel Cost Method

Pilgrimage sites, by their nature, attract a diverse range of visitors with varying motivations, economic backgrounds, and travel preferences. In this context, ITCM's ability to model the relationship between individual travel costs and visitation frequency makes it ideal for understanding the economic contributions of these sites (Nepal et al., 2018). Essentially, the travel costs, which include transportation, accommodation, and entry fees, serve as an approximation of what visitors are willing to pay for the pilgrimage experience (Merciu et al., 2021). Thus, ITCM enables the estimation of the demand for pilgrimage sites, providing a valuable measure of their economic significance (Khan & Phukan, 2013). This aligns well with the economic theory of

Marshallian demand functions, which suggests that consumers maximize utility subject to budget and time constraint of pilgrims.

The ITCM is comparatively highly appropriate for the assessing the economic contribution of pilgrimage sites as it allows for a detailed understanding of individual visitor preferences and behaviors. Similarly, this method is deeply rooted in microeconomic theory, specifically the theory of consumer behavior, which assumes that individuals make decisions to maximize their utility given a set of constraints. In this context, by examining the amount of money and time visitors are willing to spend to visit pilgrimage sites, ITCM provides valuable insights into the economic value placed on these sites. Similarly, ITCM is based on the fundamental principles of consumer behavior, where individuals allocate their income and time between private goods such as transportation, accommodation and non-market goods such as pilgrimage sites. These all economic activities are definitely make contribution for employment generation and GDP growth through various types of multiplier effect on macroeconomic perspectives. Thus, the method builds on these principles to estimate the demand for visits to pilgrimage sites, using ITCM as a proxy for valuation of tour the sacred site eventually contributing national economic growth via multiplier effects.

Conclusion

ITCM is highly appropriate for the economic valuation of pilgrimage sites due to its ability to analyze individual visitor behavior in great detail. Based on the literature survey, its application is at infancy stage to the valuation of the contribution of pilgrimage sites. Nevertheless, its application can be traced widespread for the economic valuation of several other types of recreational sites. In fact, by incorporating various socioeconomic factors and estimating consumer surplus, ITCM provides a comprehensive framework for assessing the economic contributions of pilgrimage tourism. This method offers valuable insights for policymakers, local businesses, and tourism stakeholders seeking to understand and harness the economic potential of pilgrimage sites. The ITCM is also highly relevant for policy-making and decision-making regarding pilgrimage sites. In other words, by estimating the economic value of these sites, ITCM can inform resource allocation, investment decisions, and the development of sustainable tourism strategies. This is particularly important in the context of pilgrimage tourism, where the economic contributions of religious sites often

go beyond direct revenues to include broader societal impacts, such as job creation, local business growth, and regional development. Therefore, comprehensive ITCM study can be useful than other methods to account for spiritual utility and other externalities of this site.

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Role of the Agriculture and Tourism Sector in the Economy of Nepal

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Abstract

The primary pillar of the Nepalese economy is agriculture. In addition, Nepal's tourism industry is a significant and highly promising economic sector. This study examines how Nepal's GDP is impacted by the tourism industry, which generates foreign exchange earnings, and the agriculture sector, which encompasses forestry, fisheries, and agriculture. Using secondary time series data from 1995 AD to 2020 AD, this study investigates the economic contributions of the tourism and agriculture industries to the GDP of Nepal. For trend analysis, this study additionally employed secondary time series data on the value of the agricultural sector's contribution to GDP from 1965 AD to 2023 AD. Ordinary least squares regression has been used to evaluate secondary time series data from the World Bank-World Development Indicators. This paper used agriculture, forestry, and fishing as primary independent variables, with foreign tourism receipts serving as a supporting independent variable. The GDP was the dependent variable. This study came to the conclusion that the agriculture sector and GDP have a favourable and significant relationship. Additionally, this paper's empirical findings demonstrated a positive and insignificant relationship between GDP with foreign tourism receipts.

Keywords: GDP, tourism, development, receipts, economy, agriculture

Introduction

Nepal is an agro-based country. The main backbone of Nepal's economy is agriculture. The economy of Nepal largely depends on agriculture. Agriculture is the main driver of the economy of Nepal. Approximately 60 percent of the population works in agriculture (NPC, 2017). More than 80 percent of Nepali people directly and indirectly depend on the agriculture sector, and about 60 percent of Nepali are directly dependent on the agriculture sector. Sixty-six percent of Nepal's population works directly in agriculture, which makes it an agricultural nation. (Food and Agriculture Organization of the United Nations). Out of the total population of Nepal, 65 percent of Nepali people are employed

in agriculture, and the contribution of the agriculture sector to the GDP of Nepal is 27 percent (Ministry of Agriculture and Livestock Development). According to the Fifteenth Five-Year Plan (2019/20-2023/24), the contribution of the agriculture sector to the GDP up to the completion of the 14th five-year plan is 27.4 percent, and it is the source of livelihood for 60.4 percent of the population of Nepal. So, the development of agriculture is important for the development of the national economy, and it is taken as one of the important and major sources of employment in Nepal.

The main source of income for Nepali citizens and the government of Nepal is the agriculture sector. On average, the share of agriculture in the GDP of Nepal is about 30 percent. Its share is continuously decreasing due to the innovation and expansion of new sectors, business activities, and traditional technology. Although the share of agriculture production to the GDP of Nepal is highest.

Agriculture is the main basis of the industrial development of Nepal. The agriculture of Nepal provides raw materials for agro-based industries, and it is also the main source of business for Nepal. Many people of Nepal earn their incomes from the business of agricultural production, like vegetables, fruits, fish, eggs, meat, rice, jute, oil, etc.

Out of the total area of Nepal, less than 20 percent of the area is cultivable, which is the major limitation of the agriculture sector of Nepal. The agriculture sector of Nepal is facing various types of problems like traditional technology, shortage of irrigation facilities, steeper and low productive land, lack of capital, poverty, lack of market, lack of storage facility, lack of skilled manpower, defective government policy, fragmentation of land, etc. At the same time, there is an increase in the tendency of barren land. Due to these reasons, the development of the agriculture sector is very slow, and the productivity of this sector is very low. As a result, again, the share of the agriculture sector to the GDP of Nepal is continuously decreasing. Similarly, people's involvement in the agriculture sector is decreasing regularly. However, there is a significant share of agriculture to the GDP of Nepal, and most Nepali people are directly and indirectly engaged in the agriculture of Nepal (various five-year plans of Nepal). In this context, Nepal should modernize its agriculture of Nepal with huge investment and effective implementation of a proper agriculture policy.

World Bank Report (2021) explains that the total agricultural land of Nepal in 2018 is 28.75 percent. Nepal has been recognized as an agro-based country since six-seven decades, even if the arable land of Nepal is only 14.75 %, and the geographical situation is not in favor of agriculture in the Terai region. In Terai also there is a rapid increase in

the fragmentation of land. Large numbers of Nepali people are directly engaged agriculture sector, but there is a compulsion to import many agricultural goods in large quantities from other countries. Similarly, the share of agriculture in the GDP is continuously decreasing, and thousands of Nepali people are working in India and other countries. Analysing the agriculture sector's contribution to the Nepali economy is vital in this regard.

The general objective of this study is to analyze the trend of the contribution of the agriculture sector and the tourism sector to the GDP of Nepal. The specific objective of this study is to analyze the impact of the agriculture sector and the tourism sector on the Nepali economy.

There are various studies held to analyze the contribution of the agriculture sector to the economy of Nepal and the GDP of Nepal. Most literature concluded that there is a significant contribution of agriculture to the GDP of Nepal. Upreti et. al. (2018) concluded that agriculture provides a significant contribution to the Nepali economy. According to them, Nepal ranks among the world's top 15 exporters of ginger and is the world's third-largest exporter of cardamom.

Jha et al (2021) analyzed that by using some suggestive measures, better growth of the agriculture sector can be achieved, and the income of people related to the agriculture sector can increase by using a sustainable approach. Poudel et al. (2021) concluded that the positive impact of the agriculture sector on real GDP and other sectors. The agriculture sector of Nepal is facing various challenges. Adhikari (2015) proved that significant relationship between government expenditure on agriculture and the GDP of Nepal. Bhandari (2024) analyzed that the contribution of the agriculture sector to the GDP of Nepal is decreasing due to the decrease in agricultural growth. There is a positive impact of the agriculture sector on the real GDP of Nepal (Kharel & Upadhya, 2021). Dashar (2013) observed that the production of food crops in Nepal is lower than in other South Asian countries. Chaudhary and Mishra (2021) concluded that the contribution of the agriculture sector to the GDP of Nepal is continuously decreasing, but the contribution of the non-agriculture sector to the GDP of Nepal is continuously increasing.

Chaudhary (2024) concluded that tourism revenue is decreasing from the local economy due to the rapid increase in imports of merchandise and services to satisfy the demand of the tourism sector of Nepal. Vaidya (2023) analyzed that there is a positive connection between the number of mountaineers and the real GDP of Nepal. Similarly,

Kharel (2020) also concluded the positive impact of the tourism industry in Nepali economy. Rijal (2017) analyzed and observed that there is a significant contribution of the tourism industry to the Nepali economy, but Nepal is still unable to utilize the full potential of the tourism sector. Ganeshamoorthy (2019) found that the tourism industry in Sri Lanka generates employment in the short run, but in the long run, it can't generate employment. Dhakal (2022) observed and concluded the important role of the agriculture sector in national production and poverty alleviation. However, the contribution of the agriculture sector to the GDP of Nepal has been continuously decreasing.

SGDs have been viewed as guiding guidelines for the entire growth of the agriculture sector, which is outlined in the Agriculture Growth Strategy (2015–2035). To increase the competitiveness of the agriculture industry, the ADS places a strong emphasis on the commercialization, mechanization, and diversification of livestock and agricultural goods. The ADS came to the conclusion that by industrializing the farm sector, more jobs will be created, addressing difficulties with income generation, poverty reduction, and import management. Consequently, it is determined that the primary source of employment will be the modernization and industrialization of agriculture.

In terms of income, employment, and food security, the agriculture sector has been a significant part of the economy (Economic Survey, 2019–20). Nonetheless, throughout time, the agriculture sector's share of the GDP has been gradually decreasing. In 2010–11, the agriculture industry contributed 37.1% of GDP; by 2018, that percentage had dropped to 27.7%.

From the above review, it can be observed that most of the literature examines the positive relationship between agricultural production and the GDP of Nepal, and also the positive relationship between the tourism sector and the GDP of Nepal.

Research Methodology

This study has been based on secondary data obtained from the World Bank, World Development Indicators (WB), Central Bureau of Statistics (CBS), Ministry of Finance (MOF), five-year plans, and Nepal Rastra Bank (NRB). This study also used secondary sources of information like publications of national and international governmental and non-governmental organizations, newspapers, reports of different organizations, the internet, etc., for a literature review and general overall analysis of agriculture on the economy of Nepal. This study covered the data from 1965 to 2023 for trend analysis of

value added by the agriculture sector to the GDP of Nepal. At the same time, this paper used the data for the agriculture sector and tourism sector from 1995 to 2020, based on the availability of data. Descriptive analysis and multiple regression analysis have been used to examine the secondary source data. SPSS software has been used to examine the data.

Empirical Model for Estimation

This paper used gross domestic product (GDP) as a dependent variable, the contribution of agriculture to the GDP (AGR) as the main independent variable, and receipts from international tourism (Tour) as the supporting independent variable. This paper analyzed the contribution of the agriculture sector and receipts from international tourism to the GDP of Nepal by using natural logarithms for the significant result. For empirical analysis, this paper has used the multiple regression model. The empirical estimation has been examined using the regression model that follows:

$$\ln_GDP_t = \alpha_0 + \beta_1(\ln_AGR)_t + \beta_2(\ln_Tour)_t + \varepsilon_t \quad \dots(1)$$

Where, GDP_t = Gross domestic product at time 't'

AGR_t = Contribution of agriculture to the GDP at time 't'

$Tour_t$ = Receipts from international tourism at time 't'

\ln = Natural logarithm

α_0, β_1 and β_2 = constant parameters

ε_i = Error term

This model used the positive sign for \ln_AGR and \ln_Tour as they will create a positive impact on GDP. The regression model without taking logarithms shows the constant term negative, which shows that there is no contribution of any other sector to the GDP of Nepal besides the agriculture sector and the tourism sector. But there is a great contribution of other sectors to the GDP of Nepal. The issues are resolved by the natural logarithm model mentioned above. This model is therefore suitable for this research.

Research Hypothesis (H₁): There is a significant positive impact of the agriculture sector on the GDP of Nepal.

Research Hypothesis (H₂): There is a significant positive impact of the tourism sector on the GDP of Nepal.

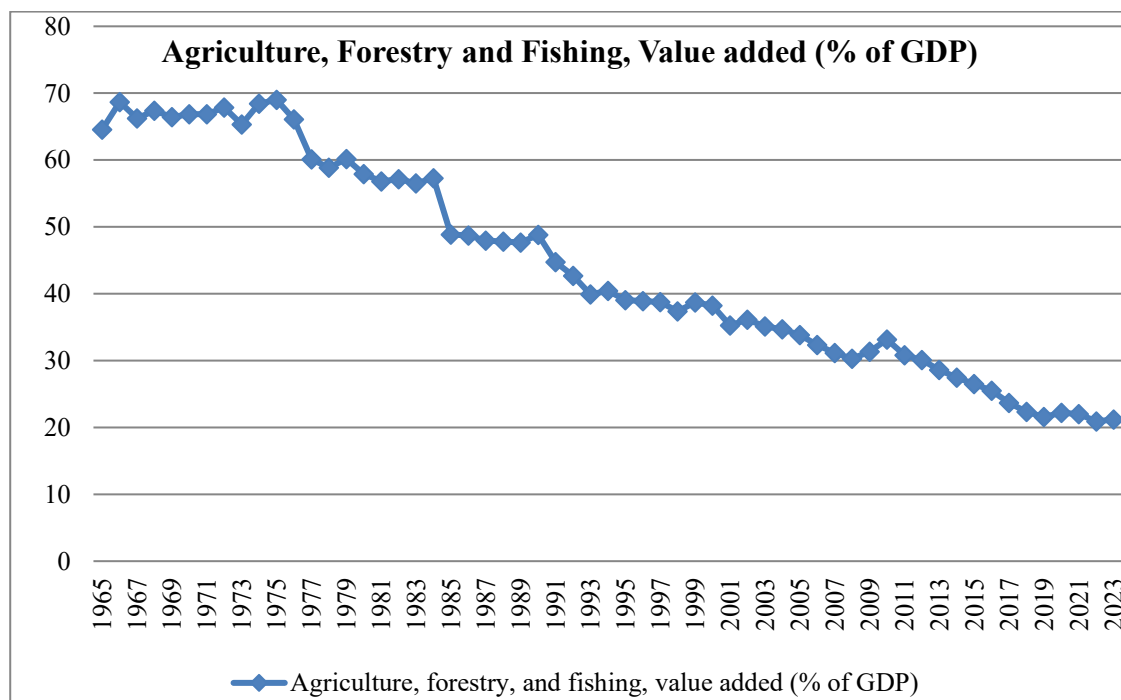
Results and Discussion

Trend of Contribution of the Agriculture Sector to the GDP of Nepal

The economy of Nepal is agro-based, and agriculture is the main occupation of source of income for Nepali people. There is a great contribution of agriculture to the Nepali economy and the economic activities of Nepal. This study used the data on GDP and the share of agriculture, including forestry and fishing, in the GDP from 1965 AD to 2023 AD. The data shows that the share of the agriculture sector to the GDP of Nepal was more than 60 percent from 1965 AD to 1977 AD. After that, the share of the agriculture sector of the GDP of Nepal has been less than 60 percent since 1979 AD. The share of the agriculture sector to the GDP of Nepal is continuously decreasing and reached 21.189 percent in 2023 AD. But the share of the agriculture sector to the GDP of Nepal is highest among the other sectors of Nepal. Therefore, Nepal's economy is dominated by the agriculture sector. The share of value added by the agriculture sector to the GDP of Nepal for various years has been explained in Figure 1.

Figure 1

Trend of Agriculture, Forestry and Fishing, Value added (% of GDP)



Source: World Bank: World Development Indicators 2024

Figure 1 shows the share of agriculture, forestry, and fishing to the GDP of Nepal for 59 years. This data proved the significant role of the agriculture sector in the GDP of Nepal. Figure 1 shows that the contribution of the agriculture sector to Nepal's GDP is more than 60 percent up to 1977 AD. Then, after its share is continuously decreasing and reaches 30 percent by 2008 AD. The value added or the share of agriculture to the GDP of Nepal is about 30 percent from 2008 to 2012 AD. After 2012 AD, the value added by the agriculture sector decreased to less than 30 percent, and it is 21.189percent in 2023 AD.

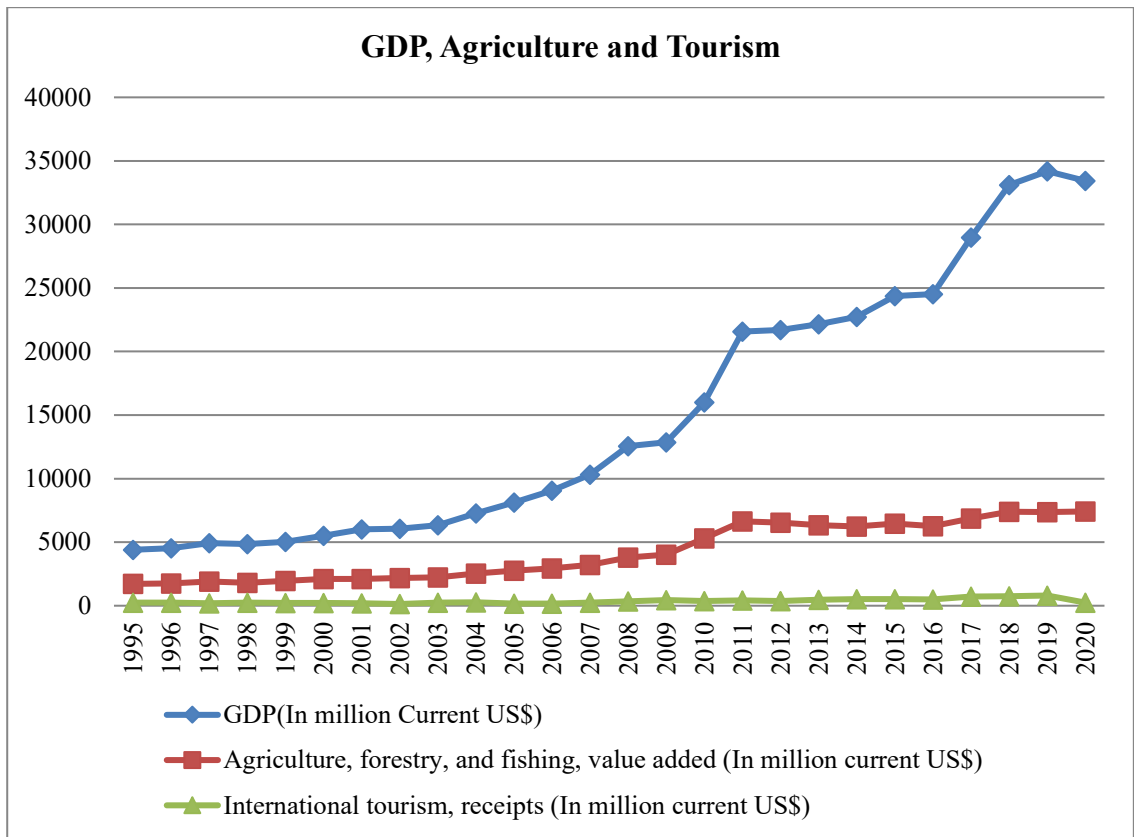
Value of GDP; Agriculture, Forestry, Fishing; International Tourism Receipts

This paper used the agriculture sector and tourism sector as independent variables and GDP as a dependent variable. GDP of Nepal represents the economic condition of Nepal. The agriculture sector is one of the dominant sectors of Nepal, and tourism is an important and highly potential sector for the Nepali economy. As a result, the tourism industry serves as a supporting independent variable for the study, whereas the agriculture industry serves as a key independent variable in this paper.

This paper includes the data of GDP, the agriculture sector, and tourism sector from 1995 AD to 2020 AD as the secondary data, as international tourism receipts are only available from 1995 AD to 2020 AD, even if data for GDP and the agriculture sector are available for some more years. The data shows that the value of GDP is continuously increasing from 1995 AD to 2020 AD, and the value added by the agriculture sector is also increasing continuously during the same period of time. The share of the agriculture sector to the GDP of Nepal is continuously decreasing, but the rate of increase in value added by the agriculture sector is less than the rate of increase in GDP of Nepal. At the same time, the value of international tourism receipts for Nepal is nearly similar from 1995 AD to 2020 AD, and the contribution of international tourism receipts to the GDP of Nepal is much less than the contribution of the agriculture sector during the same period of time. This fact has been proved by the following figure 2:

Figure 2

Trend of GDP, Agriculture and Tourism



Source: World Bank: World Development Indicators 2024

Figure 2 shows the value of GDP, value added by the agriculture sector, and international tourism receipts in million current US\$. This figure proves that the contribution of the agriculture sector is much greater than the contribution of the tourism sector to the Nepali economy. Figure 2 shows that the value of international tourism receipts from 2019 to 2020 has decreased rapidly due to the economic recession created by the COVID-19 pandemic.

Descriptive Statistics for the Variables

This section presents and analyzes the descriptive statistics of the dependent variable GDP and the independent variables, agriculture and tourism. The descriptive statistics include the minimum and maximum values, mean, standard deviation, and total number of observations of the associated variables under this study. Table 1 presents the descriptive statistics of the included dependent and independent variables of 26 years for the study period from 1995 AD to 2020 AD.

Table 1*Descriptive Statistics of the Variables*

	N	Minimum	Maximum	Mean	Std. Deviation
GDP(In million current US\$)	26	4401.104	34186.18	15021.123	10270.346
Agriculture, forestry, and fishing, value added (In million current US\$)	26	1718.253	7415.616	4225.649	2200.016
International tourism, receipts (In Million US\$)	26	134	801	352.58	186.523

Table 1 shows the descriptive statistics for related variables from 1995 AD to 2020 AD, including the mean, standard deviation, minimum and maximum values, and the total number of observations. The results show that the value of GDP ranges from US\$4441.104 million to US\$ \$34186.123 million with a US\$15021.123 million mean and a US\$ 10270.346 million standard deviation for 26 observations. Similarly, value added by agriculture, forestry, and fishing ranges from US\$ \$1718.253 million to US\$ \$ 7415.616 million with mean and standard deviations of US\$4225.649 million and US\$ \$ 2200.016 million respectively. Likewise, receipts from international tourism range from US\$134 million to US\$801 million, with a mean of US\$352.58 million and a standard deviation of US\$186.523 million.

Correlation Analysis

This section of the study presents the correlation coefficient between the dependent and independent variables. Table 2 presents the Bivariate Pearson correlation coefficient between all the associated variables for the study period from 1995 AD to 2020 AD with 26 observations.

Table 2*Correlations Coefficient between Dependent and Independent Variables*

	GDP	Agriculture, forestry, and fishing	International tourism, receipts
GDP	1		.
Agriculture, forestry, and fishing	.977**	1	.
International tourism, receipts	.827**	.803**	1

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 2 shows the value of the bi-variate Pearson correlation coefficient among the dependent variable, GDP, and independent variable and independent variables, agriculture and tourism. The analyzed results show that the correlation coefficient between GDP and agriculture, forestry, and fishing is 0.977 and statistically significant at a 1 percent level of significance. It proved that there is a strong and positive correlation between the dependent variable GDP and the independent variable, agriculture, forestry, and fishing. It indicates that the higher the value of agriculture higher the value of GDP for the Nepali economy.

Similarly, Table 2 shows that the correlation coefficient between GDP and international tourism receipts is 0.827 and statistically significant at a 1 percent level of significance. It also proved that there is a strong and positive correlation between GDP and international tourism receipts. It justified that there is a strong positive relationship between GDP and tourism. Likewise, the correlation coefficient between both independent variables, agriculture and tourism, is 0.803 and statistically significant at a 1 percent level of significance. It justified that there is again a strong and positive correlation between both independent variables. It also indicates that both independent variables are positively related to each other.

Regression Analysis of the Contribution of Agriculture Production and Tourism to GDP

Multiple regression analysis was utilized in this study to determine the link between the independent variables the tourist and agriculture sectors and the dependent variable, GDP. Table 3 displays the conclusions drawn from the regression analysis.

Table 3 demonstrates that every independent variable has the predicted sign and is desirable. It shows that the dependent and independent variables have a positive connection. The empirical findings demonstrated a strong and favorable correlation between GDP and the agricultural sector. In addition, there is a small but favorable correlation between GDP and the travel and tourism industry. But again constant term is positive and statistically significant, indicating that there is also a contribution of some other sectors to the GDP of Nepal besides the agriculture and industrial sectors.

Table 3*Regression Coefficients*

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.843	0.123		6.859	0.000	
Ln_AGR	1.279	0.049	0.976	25.863	0.000	2.774
Ln_Tour	0.034	0.055	0.023	0.612	0.546	2.774
ANOVA						
	Sum of Squares	Df	Mean Square	F	Sig.	
Regression	13.165	2	6.583	963.398	.000 ^b	
Residual	0.157	23	0.007			
Total	13.322	25				
Model Summary						
R	R Square	Adjusted R Square	Std. Error of the Estimate			
.994 ^a	0.988	0.987	0.08266			

Based on Table 3, there is a significant contribution of the agriculture sector to the GDP of Nepal. The Agricultural sector, i.e., agriculture, forestry, and fishing, value added to the GDP (Ln_AGR) and GDP (i.e., Ln_GDP) are positively correlated. Based on Table 3, the coefficient of Ln_AGR, i.e., β_1 , is 1.279, and it indicates that when agriculture production is increased by US\$ 1 billion, then the GDP of Nepal is increased by US\$ 1.279 billion.

Similarly, the tourism sector, i.e., receipts from international tourism (Ln_Tour) and GDP (i.e., Ln_GDP) are also positively related. Based on Table 3, the coefficient of β_2 is 0.034, and it indicates that when receipts from international tourism are increased by US\$ 1 billion, then the GDP of Nepal is increased by US\$ 0.034 billion. The constant term, i.e., α , is 0.843 shows the autonomous value of GDP is US\$ 0.843. It indicates that the GDP will be US\$ 0.843 billion if the agricultural production and receipts from international tourism are zero. It also indicates that the value of GDP will be determined by other factors besides agriculture and tourism.

The independent variables account for 98.8% of the variance in the dependent variable, \ln_GDP , according to the R-squared value of 0.988. In other words, the explanatory variables of tourism and agriculture can account for \ln_GDP . According to Table 3's empirical findings, tourism is statistically negligible at 1 and 5 percent, while the constant term and the agriculture sector (\ln_AGR) are statistically significant at less than 1 percent. Based on Table 3, the calculated value of F is 963.398, and the tabulated value of F statistics at a 1 percent level of significance with 2 and 23 degrees of freedom is 5.66. Here, the calculated value of the F-statistic is greater than the tabulated value at a 1 percent level of significance. Therefore, the model is overall statistically significant at 1 percent. So, it is concluded that there is a significant contribution of the agriculture sector and the tourism sector to the GDP of Nepal.

Table 3 also proved that the variance inflation factor (VIF) is less than 5, i.e., 2.774 for both independent variables, which proves that there is no multi-collinearity between the included independent variables.

Conclusion

Nepal is an agro-based nation, with the agricultural industry serving as the primary economic pillar. At the same time, Nepal's tourist industry is regarded as a significant and highly promising economic sector. The agriculture sector's contribution to Nepal's GDP is steadily declining. Various factors like lack of irrigation facilities, lack of research, lack of capital, lack of market, lack of storage facilities, lack of transportation, low productivity, traditional farming, etc, and the development of other economic sectors, the share of agriculture in the GDP is decreasing regularly. But again, the contribution of agriculture is nearly one-third to GDP, and about 60 percent of Nepali people directly depend on agriculture. At the same time, it is also taken as the main source of the government of Nepal and a source of raw materials for agro-based industries. Many people in Nepal are doing business in agricultural products. Therefore, there is a great contribution of the agriculture sector to the Nepali economy and the GDP of Nepal. The share of the agriculture sector in the GDP of Nepal can be increased by solving various problems of the agriculture sector of Nepal.

The share of receipts from international tourism is very small of the GDP of Nepal, and its contribution is relatively smaller than the agriculture sector. However, the tourism sector of Nepal is considered a highly potential sector of Nepal. In the future, the

tourism sector can be developed as a major sector of Nepal with the development of tourism infrastructure.

This study demonstrated a strong and positive correlation between GDP and the agricultural sector. This study demonstrates that \ln_AGR 's coefficient is 1.279. It showed that Nepal's GDP rises by 1.279 percent for every 1% increase in agricultural productivity. The paper's empirical findings also demonstrated that the tourism industry and GDP had a small but beneficial relationship. This study demonstrates that the coefficient of \ln_Tour is 0.034, meaning that a 1% rise in foreign tourist receipts results in a 0.034 percent increase in Nepal's GDP. This study proved that the constant term is positive and statistically significant. This paper shows that the value of the constant term is 0.843, indicating that there is also a contribution of other sectors to the GDP of Nepal.

Finally, this study came to the conclusion that one of the main economic sectors of the Nepali economy is agriculture, and that the country's economy benefits from the growth and modernization of this sector. Similarly, this paper also concluded that tourism is another and the most potential economic sector for the Nepali economy, even if its contributions are much less than the agriculture sector. The development of tourism infrastructures and the advertisement of beautiful areas of Nepal create a positive impact on the Nepali economy.

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Appendix I

Year	GDP (In million current US\$)	Agriculture, forestry, and fishing, value added (% of GDP)
1965	735.2671	64.58408
1966	906.8119	68.69301
1967	841.974	66.23538
1968	772.2314	67.3916
1969	788.642	66.42455
1970	865.9753	66.86816
1971	882.7655	66.83822
1972	1024.098	67.84646
1973	972.1017	65.33253
1974	1217.954	68.41818
1975	1575.789	69.00609
1976	1452.789	66.08601
1977	1382.4	60.12153
1978	1604.162	58.86884
1979	1851.25	60.16205
1980	1945.917	57.89902
1981	2275.583	56.79862
1982	2395.424	57.16729
1983	2447.175	56.52251
1984	2581.207	57.29881
1985	2619.914	48.85803
1986	2850.782	48.69715
1987	2957.255	47.95033
1988	3487.01	47.79211
1989	3525.226	47.68957
1990	3627.56	48.80289
1991	3921.476	44.72339
1992	3401.212	42.66526
1993	3660.042	39.89595
1994	4066.776	40.44171
1995	4401.104	39.04141
1996	4521.58	38.92766
1997	4918.692	38.78073
1998	4856.255	37.39301
1999	5033.642	38.70148

2000	5494.252	38.2439
2001	6007.055	35.24767
2002	6050.876	36.1503
2003	6330.473	35.10588
2004	7273.938	34.67636
2005	8130.258	33.8249
2006	9043.715	32.36649
2007	10325.62	31.16441
2008	12545.44	30.30572
2009	12854.99	31.32265
2010	16002.66	33.17938
2011	21573.87	30.80549
2012	21703.1	30.07606
2013	22162.2	28.62266
2014	22731.61	27.4619
2015	24360.8	26.51851
2016	24524.11	25.51788
2017	28971.59	23.69955
2018	33111.53	22.33467
2019	34186.18	21.58337
2020	33433.66	22.18009
2021	36924.84	22.02145
2022	41182.94	20.91437
2023	40908.07	21.18955

Source: World Bank: World Development Indicators 2024

Appendix II

(In million current US\$)

Year	GDP	Agriculture, forestry, and fishing, value added	International tourism, receipts
1995	4401.104	1718.253	232
1996	4521.58	1760.145	237
1997	4918.692	1907.505	201
1998	4856.255	1815.9	248
1999	5033.642	1948.094	229
2000	5494.252	2101.216	219
2001	6007.055	2117.347	191
2002	6050.876	2187.409	134
2003	6330.473	2222.368	232

2004	7273.938	2522.337	260
2005	8130.258	2750.051	160
2006	9043.715	2927.133	157
2007	10325.62	3217.918	234
2008	12545.44	3801.985	353
2009	12854.99	4026.522	439
2010	16002.66	5309.582	378
2011	21573.87	6645.936	415
2012	21703.1	6527.437	379
2013	22162.2	6343.412	460
2014	22731.61	6242.532	511
2015	24360.8	6460.121	509
2016	24524.11	6258.032	498
2017	28971.59	6866.136	712
2018	33111.53	7395.351	740
2019	34186.18	7378.531	801
2020	33433.66	7415.616	238

Source: World Bank: World Development Indicators 2024



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The Influence of Non-Monetary Rewards on Enhancing Employees' Performance

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Abstract

Non-Monetary rewards are prizes or perks given to workers that do not include direct money remuneration. These incentives inspire workers, increase job satisfaction, and boost performance. As a result, nonmonetary incentives play an important role in improving employee performance. The study's objectives are to examine the impact of non-monetary rewards on employee performance in commercial banks in Karnali Province, specifically how flexible work arrangements, employee recognition, career development opportunities, and job promotions affect employee performance. This study used a structured survey to obtain primary data from 335 workers at several commercial banks in Karnali Province. Participants were selected using convenience sampling, and the data were analyzed using descriptive and inferential statistical techniques to uncover patterns and correlations between non-monetary incentives and employee performance. The results show a favorable and substantial association between employee performance and aspects including flexible work arrangements, career development chances, and job promotions. On the other hand, employee recognition was shown to have a modest influence on performance, demonstrating that the efficiency of various non-monetary incentives differs. The research shows that non-monetary incentives, notably flexible work arrangements, career development opportunities, and job promotions, majorly impact employee performance in the commercial banking industry. Employee recognition, although beneficial, has a less noticeable impact. These results have practical implications for bank managers and HR experts, emphasizing the necessity of developing reward systems that prioritize meaningful nonmonetary incentives. Commercial banks may promote employee engagement, increase productivity, minimize attrition, and support long-term organizational success by emphasizing flexibility, professional development, and progression possibilities.

Keywords: *Flexible working arrangements, employee appreciation, career development possibilities, job advancement, and employee performance.*

Introduction

Rewards inspire individuals to put their best efforts into developing creative ideas. These concepts not only improve corporate processes but also help companies perform

better, both financially and non-financially. While cash pay is a typical incentive, various nonmonetary methods exist to recognize and motivate personnel. These include earning praise from supervisors, being assigned big projects or duties, and obtaining direct attention or acknowledgment from leaders. Such benefits generate a feeling of worth and recognition, which boosts employee engagement and creativity (Aktar et al., 2012).

Similarly, a reward system is an important tool for management in channeling employee motivation in the appropriate direction. In summary, incentive systems seek to recruit personnel to the business, keep them engaged in their positions, and encourage them to perform at high levels nonmonetary awards influence workers' impressions of the workplace reward environment (Khan et al., 2013). Employees may see a business as helpful and caring when focusing on nonmonetary instruments such as more extended vacations and family perks. Rewards are vital for describing many employment factors that significantly influence the business, such as job satisfaction. These incentives include all the business's financial advantages, such as compensation, promotions, verbal recognition, and responsibilities (Depedri et al., 2010). In a similar vein, Employee performance, which is particularly impacted by the incentive structure used in a business, is also a critical element that promotes organizational development and sustainability (Odhiambo & Iravo, 2019). In the same manner, it is a valuable tool for paying workers and attracting, motivating, and retaining talent (Abdullah & Wan, 2013). Employees contribute significantly to the success of companies and organizations. When workers are treated properly, it improves the company's overall performance. Their performance is intimately related to their jobs and responsibilities in the company. As a result, sound personnel management as valuable human resources is critical to any company's success (Arifuddin et al., 2021). Similarly, staff effectiveness significantly affects organizational performance. This effectiveness represents the degree of productivity, efficiency, and competence with which people carry out their duties and accomplish their goals (Porwal, 2023).

According to Hashim and Ullah (2017), flexible work arrangements are critical to improving employee performance inside a business. They assist in minimizing absenteeism while also increasing employee productivity, dedication, and loyalty. Flexible schedules empower employees to take greater responsibility, ownership, and control of their work-life balance. Furthermore, when managers help people balance

their professional and home life, it increases loyalty and dedication. Consequently, personnel may focus more successfully on their responsibilities and actively seek professional growth. Employee recognition refers to the formalized practice of acknowledging exceptional workplace performance or conduct, as defined by David et al. (2015). This practice encompasses diverse modalities, including nonmonetary rewards (e.g., service awards such as "Employee of the Year" or verbal commendations) and monetary incentives (e.g., spot bonuses, quarterly rewards, or annual performance-based bonuses). The primary objective of such recognition is to reinforce desired behaviors, foster employee engagement, and drive sustained performance improvements. Employee performance is critical to a company's success since the organization's results directly result from its workers' efforts. According to Robbins (2017), a person's performance is determined not just by internal elements such as motivation and competence but also by the possibilities for professional growth the business provides. These possibilities encourage individuals to develop their abilities, increasing their effectiveness in the workplace. Promoting employees significantly enhances performance by reinforcing accountability, ambition, and engagement. It implies a promotion in rank, usually coupled with additional duties. Promotions encourage workers to improve their performance and use their abilities more effectively to achieve sustained development. This study looks at the complicated implications of significant elements such as flexible work arrangements, employee appreciation, career development, and job advancement on employee performance. However, there is a significant vacuum in knowing how these factors influence employee performance, particularly in the Karnali province. As a result, the research aims to explore the impact of these variables on employee performance in this location.

Review of Literature

Flexible Work Arrangements and Employee Performance

Altindag and Siller (2014) studied the impact of flexible working techniques on employee performance and concluded that flexible work models help increase and sustain staff productivity. Similarly, Hashim and Ullah (2017) asserted that flexible working arrangements significantly enhance employee performance by fostering autonomy and alignment with organizational goals. By this, Obisi (2017) stressed the beneficial impact of flexible work arrangements on employee performance, with data revealing a substantial and favorable effect. Stella (2020) supported these results by

proving a favorable and substantial link between flexible work options and employee productivity. Likewise, Bett et al. (2022) investigated the impacts of flexible work arrangements and discovered that they considerably impacted employee performance.

Furthermore, Eshak et al. (2021) found that flexible work arrangements help to boost employee performance. Giovanis (2017) backed up this viewpoint, demonstrating that flexible employment arrangements significantly influence workplace performance. The aforementioned scholars empirically demonstrated that flexible work arrangements significantly impact employee performance outcomes. Based on this data, the current researcher hypothesized the following:

H_{A1}: Flexible work arrangements have a significant impact on employee performance.

Employee Recognition and Employee Performance

Kariuki and Kiiru (2021) investigated the link between employee recognition and performance in public hospitals in Nyeri County, Kenya. Their research discovered that employee appreciation has a favorable and statistically significant effect on employee performance. Similarly, Chantal et al. (2022) examined the impact of employee recognition programs on performance in the Shyogwe Diocese and concluded that such programs significantly increased employee performance. Likewise, Maharjan and Lamichhane (2022) also underlined that acknowledgment is a powerful incentive that improves labor performance. In line with these results, Maket and Odenyo (2023) identified a statistically significant positive correlation between employee recognition practices and enhanced workplace performance. Based on the experts' insights about the significant influence of employee recognition on employee performance, the researcher proposes the following hypothesis:

H_{A2}: Employee recognition has a substantial impact on employee performance.

Career Development Opportunities and Employee Performance

Scholarly research has consistently identified career development and organizational culture as key factors influencing employee performance. Nami Nasution et al. (2018) empirically confirmed that both elements significantly improved employee performance, with statistical analysis validating their positive impact. Supporting this, Arifuddin et al. (2021) found that career development substantially influenced employee performance. Similarly, Manggis et al. (2018) found that employee performance is favorably and substantially impacted by career development. Yusuf Iis et al. (2022)

underlined that career development is critical for boosting employee performance. Similarly, Firman (2021) investigated how career growth influences employee performance. The results of this research show that career development has a favorable and substantial impact on employee performance. Winda et al. (2017) observed that career development has a significant effect on employee performance, which is similar with the findings of Gibran and Ramadani (2021). Finally, Febrianti et al. (2020) found a favorable and substantial link between career advancement and employee performance. These research all support the premise that career development is important in improving employee performance. The experts mentioned above noted that professional development opportunities substantially influence employee performance. Based on this finding, the researcher presents the following hypothesis.

H_{A3}: Career development opportunities have a substantial impact on employee performance.

Job Promotion and Employee Performance

Duru et al. (2023) examined the association between promotion and employee performance. The findings suggest that the promotion has a good and considerable impact on employee performance. Similarly, Nasar et al. (2023) discovered that job promotions significantly improve employee performance. Nyaga and Omuya (2024) investigated the influence of promotion policies on employee performance at the National Bank of Kenya. Their empirical analysis revealed that structured promotion procedures significantly enhanced staff performance outcomes, with statistical validation supporting this relationship. Furthermore, Rinny et al. (2020) said that staff are the most valuable resource for an organization's success. Because human resources drive organizational success, implementing effective human resource management techniques is crucial for improving employee performance. Their findings demonstrated that job promotions had a significant impact on employee performance.

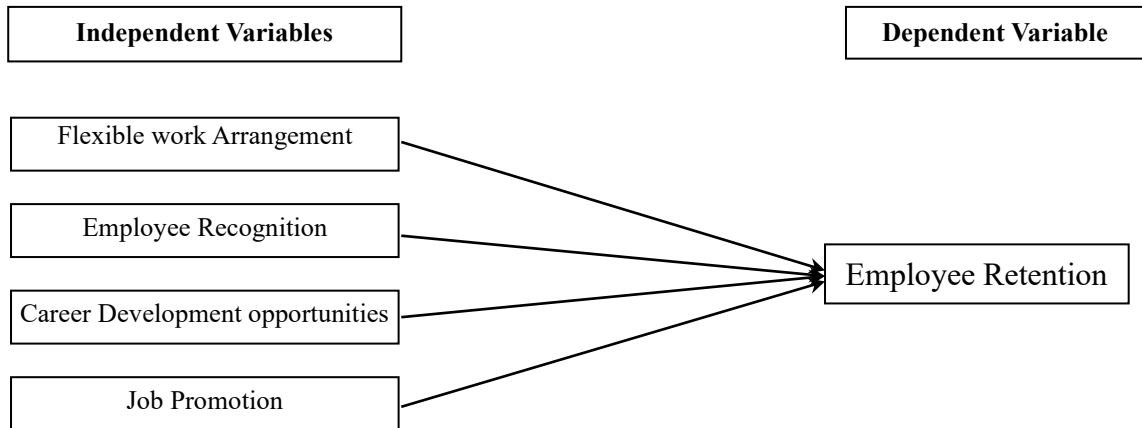
Yuliza et al. (2021) highlighted the crucial role of human resources in managing and utilizing employees to achieve business objectives. The study concluded that job promotions significantly influenced employee performance. Yamin et al. (2020) discovered that job promotions considerably impacted employee performance. Building on expert confirmation that job promotion significantly impacts employee performance, the current researcher suggests the following hypothesis.

H_{A4}: Job promotions have a significant impact on employee performance.

Conceptual Framework

Figure 1

Conceptual Framework of the Study



Methodology

This study employed a causal-comparative research design to investigate the influence of non-monetary rewards on employee performance within the banking sector of Karnali Province. The independent variables examined included flexible work arrangements, employee recognition, career development opportunities, and job promotion, while the dependent variable focused on employee performance (revised for consistency with the analysis and study title). Structured questionnaires were developed to collect data, incorporating inputs from subject-matter experts and a review of existing literature. The instrument comprised two sections: (1) closed-ended multiple-choice questions to capture demographic information and (2) a five-point Likert scale to measure perceptions of non-monetary rewards and their association with performance outcomes.

Prior to distribution, respondents were briefed on the purpose of the study and requested to allocate time for completion. A total of 355 questionnaires were distributed across bank branches in Karnali Province, yielding 335 valid responses (94.4% response rate). Data reliability was assessed using Cronbach's Alpha, demonstrating internal consistency. Both descriptive statistics (e.g., frequencies, means) and inferential analyses were conducted. Pearson's correlation coefficient was applied to evaluate relationships between variables, while linear regression analysis tested the predictive effect of non-monetary rewards on employee performance. All analyses were performed using SPSS version 25.

Results and Discussion

The respondents' demographic information, i.e., age, gender, cast, and education, is presented below.

Table 1

Demographic Profile of the Respondents

Categories	Frequency	Percent	
Age	Up to 20	61	18.20
	21-30	163	48.70
	31-40	60	17.90
	Above 41	51	15.20
Gender	Male	241	71.90
	Female	94	28.10
Cast	Brahmin	118	35.20
	Chhetri	136	40.60
	Janajati	42	12.50
	Others	379	11.60
Educational Status	Upto + 2	111	33.10
	Bachelor	148	44.20
	Master	67	20.00
	Above master	9	2.70

Table 1 summarizes demographic information for 335 individuals across various categories. Regarding age, the largest group (48.7 percent) is between 21 and 30 years old, followed by individuals aged 20 or younger (18.2 percent), those aged 31 to 40 (17.9 percent), and individuals over 41 years (15.2 percent). Gender distribution reveals a predominance of males (71.9 percent), with females comprising 28.1 percent of the sample. In terms of caste, Chhetri accounts for the largest share (40.6 percent), followed by Brahmin (35.2 percent), Janajati (12.5 percent), and others (11.6 percent). Educational qualifications show that the majority hold a bachelor's degree (44.2

percent), with 33.1 percent having education up to the +2 level, 20 percent holding a master's degree, and 2.7 percent attaining education above the master's level.

Overall, the data reflects a predominantly young, male-dominated sample with diverse caste representation and varied levels of educational attainment.

Inferential Statistics

As described in the research methodology, correlation analysis was conducted to explore the relationships among the variables. In contrast, regression analysis was utilized to evaluate the influence of the independent variables—flexible work arrangements, employee recognition, career development, and job promotion—on the dependent variable, employee performance.

Table 2

Correlations Analysis of Independent and Dependent Variable

	FW	ER	CD	JP	EP
FW	1				
ER	.764**	1			
CD	.643**	.638**	1		
JP	0.714**	.537**	.638**	1	
EP	.601**	.557**	.641**	0.767**	1

***. Correlation is significant at the 0.01 level (2-tailed).*

Presents the results of the correlation analysis conducted to examine the relationships among the variables. The analysis revealed a strong positive correlation between flexible work arrangements, employee recognition, career development, job promotion, and employee performance. Notably, all correlations are statistically significant at the 0.01 level, indicating a strong relationship, as the p-value is less than the alpha level ($P < 0.05$) for all correlations.

Reliability Test

A reliability test was conducted to assess the validity and consistency of the questionnaire items.

Table 3*Reliability Statistics*

Variables	No. of Items	Cronbach's Alpha
Flexible Work Arrangement	10	0.866
Employee Recognition	10	0.845
Career Development Opportunities	10	0.868
Job Promotion	10	0.724
Employee Performance	10	0.852

Table 3 displays the Cronbach's alpha values calculated for the five variables analyzed in this study. The results indicate that flexible work arrangements had a Cronbach's Alpha of 0.866, employee recognition 0.845, career development 0.868, and job promotion 0.724. Employee performance showed a Cronbach's Alpha of 0.852. Significantly, all values exceeded the commonly accepted threshold of 0.7, demonstrating a high level of internal consistency in the data. The threshold of 0.7 is widely regarded as a standard benchmark for Cronbach's alpha and reliability testing (Christmann & Van Aelst, 2006).

Table 4*Model Summary of Multivariate Regression Analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.910 ^a	0.828	0.826	1.40202	2.267

a. Predictors: (Constant), FW, ER, CD, JP

Table 4 reveals that flexible work arrangements, career development opportunities, employee recognition, and job promotion collectively account for a significant portion of the variance in employee performance. Specifically, these factors explain 82% of the variance in employees performance, as reflected by an adjusted R² value of 0.826. This indicates that other factors not examined in this study influenced the remaining 18% of the variation in employee performance.

Additionally, the Durbin-Watson statistic of 2.267 assesses the presence of autocorrelation in the residuals of the regression model. This value falls close to the ideal benchmark of 2.0, which indicates no significant autocorrelation. Since the

statistic ranges between 0 and 4, values near 2 suggest that the residuals are independent and uncorrelated. A result of 2.267 lies within the generally accepted range (1.5–2.5) for assuming independence of errors, implying minimal risk of positive or negative autocorrelation affecting the model's validity.

Table 5

ANOVA of Independent Variable and Dependent Variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3114.676	4	778.669	396.136	.000 ^b
	Residual	648.668	330	1.966		
	Total	3763.343	334			

a. *Dependent Variable: EP*

b. *Predictors: (Constant), FW, ER, CD, JP*

The ANOVA results (Table 5) reveal a significant statistical relationship between employee performance and the studied predictors flexible schedules, recognition, career growth, and job progression in Karnali's banking sector. The F-test value of 396.136 and a p-value of 0.000 indicate that the regression model is statistically significant. At a 5% significance level, these findings validate the model and support the hypothesis that workplace factors influence employee performance.

Table 6

Coefficient of Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-4.696	3.18		-1.477	0.141		
FW	0.74	0.043	0.815	17.043	0.000	0.228	4.380
ER	0.006	0.042	0.008	0.154	0.878	0.213	4.695
CD	0.114	0.029	0.126	3.983	0.000	0.525	1.903
JP	0.228	0.059	0.095	3.853	0.000	0.856	1.168

a. *Dependent Variable: EP*

The results of a multivariate regression research with employee performance as the dependent variable and flexible work schedules, career advancement, employee recognition, and job promotion as independent variables are shown in Table 6. The analysis reveals that the p-value for flexible work arrangements is 0.000, below the 5% significance threshold (0.05). This confirms that flexible work arrangements have a significant impact on employee performance. Furthermore, the results indicate a positive relationship between employee performance and flexible work arrangement practices.

Similarly, the research indicates that employee recognition does not significantly influence employee performance at the 5% significance level, as its p-value of 0.878 exceeds the threshold of 0.05. Therefore, employee recognition has minimal impact on employee performance.

On the other hand, the study reveals that the p-value for career development is 0.000, which is below the 5% significance threshold (0.05). This demonstrates that career development has a significant impact on employee performance. Moreover, a positive relationship was identified between career development and employee retention.

Finally, the research determined that the p-value for job promotion is 0.000, less than the 5% significance threshold (0.05). This shows that job promotions have a statistically significant effect on employee performance. Furthermore, there was a favorable correlation between employee performance and the application of job promotion techniques.

Additionally, the collinearity statistics (Tolerance and VIF) assess multicollinearity among predictors. The first two predictors show moderate collinearity (Tolerance \approx 0.21–0.23, VIF \approx 4.38–4.69), but remain within acceptable thresholds (VIF $<$ 5). The latter two exhibit minimal collinearity (Tolerance \approx 0.53–0.86, VIF \approx 1.16–1.90), aligning with ideal ranges. With all VIFs below 5 and Tolerance values above 0.1, the model demonstrates stability and reliability, confirming no severe multicollinearity issues per standard guidelines.

Table 7*Summary of Hypothesis Testing*

Hypothesis No.	Hypothesis Result	Accept or Reject Decision
H _{A1}	Flexible work arrangement significantly impacts employee performance.	Accepted
H _{A2}	Employee recognition significantly impacts employee performance.	Rejected
H _{A3}	Career development opportunities significantly impact employee performance.	Accepted
H _{A4}	Job promotion significantly impacts employee performance.	Accepted

The research evaluated four hypotheses about variables impacting employee performance. The first hypothesis (HA1) stated that "flexible work arrangements significantly impact employee performance." The findings validated this assumption, demonstrating a significant effect with a significance value of 0.000. The research results support the assumption, which is comparable to the study done by (Altindag and Siller, 2014; Hashim and Ullah, 2017; Stella, 2020; Eshak et al., 2021; and Bett et al., 2022).

Likewise, according to the second hypothesis (HA2), "employee recognition significantly impacts employee performance." With a significance score of 0.878, which indicates no meaningful connection, this hypothesis was not supported. Since the study's results deviate from those of previous studies, they run counter to the initial hypothesis (Kariuki& Kiiru, 2021; Chantal et al., 2022; Maharjan and Lamichhane 2022; and Maket and Odenyo, 2023).

The third hypothesis (HA3) proposed, "Career development opportunities significantly impact employee performance." This was likewise validated since effective communication significantly influenced employee retention with a p-value of 0.00. The research results back up the hypothesis and are compatible with findings from a comparable study done by (Arifuddin et al., 2021; Nami Nasution et al., 2018; Manggis et al., 2018; Yusuf Iis et al., 2022; Firman 2021 and Febrianti et al. 2020).

Finally, the fourth hypothesis (HA4) indicated that "job promotion significantly impacts employee performance." The findings confirmed this, with a significance value of 0.000. The research findings support the assumption and are consistent with those of a comparable study done by (Duru et al., 2023 Nasar et al., Nyaga and Omuya 2024; Rinny et al., 2020; and Yamin et al. 2020).

Conclusion

The study examined factors influencing employee performance in Karnali Province, emphasizing flexible work arrangements, employee recognition, career development, and job promotion. Utilizing multivariate regression analysis, the research explored the relationship between these variables and employee performance. Findings indicated that flexible work arrangements, career development opportunities, and job promotions significantly improved employee performance. However, employee recognition showed no statistically significant effect on performance outcomes.

By emphasizing the value of flexible work arrangements, career development opportunities, and job promotion in enhancing employee performance in Karnali province, the study advances our understanding of employee performance. Using multivariate regression analysis, it presents actual data on the relative relevance of these components while also questioning traditional beliefs by finding that employee recognition has no meaningful impact on performance. This study provides valuable insights for companies and policymakers, highlighting the need to focus on influential aspects such as flexibility, development opportunities, and work satisfaction to enhance employee outcomes and retention.

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The Influence of Talent Management Practices on Employee Performance in Service-Based Organizations

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Abstract

Talent management is a strategic process focused on attracting, developing, retaining, and optimizing an organization's workforce to achieve its goals efficiently. Within this framework, the study explores how talent management practices influence employee performance in the service sector of Surkhet District. This study employed a quantitative research approach, collecting survey data from 315 service sector employees in Surkhet District. Selected for its demographic diversity and role as the administrative capital of Karnali Province, the district's workforce varies significantly in race, caste, age, gender, and marital status factors that often complicate the alignment of employee performance with organizational goals. This setting provided an ideal context for investigating the impact of talent management practices. Data was gathered through a structured questionnaire and analyzed using regression analysis in SPSS 25 to evaluate the relationship between talent management variables and employee performance. The results demonstrate a significant positive influence of key independent variables talent planning, talent development and attraction, recruitment and retention strategies, and rewarding and compensation systems on employee performance. These practices strengthen engagement, motivation, and productivity by implementing strategic workforce planning, fostering professional growth, optimizing hiring processes, and offering competitive rewards. Collectively, they contribute to enhanced organizational success. Service sector organizations face challenges in adopting strategic HR practices, including limited awareness, resource constraints, and a shortage of skilled professionals. Given the traditional emphasis on operational efficiency and the difficulties of managing workforce diversity, this study explores how talent management can enhance organizational performance in the region.

Keywords: Talent planning, Developing & attracting, Recruitment & retention, Rewarding & Compensation and performance

Introduction

Effective talent management is vital for the sustainability and competitiveness of the country's manufacturing and service sector, a key contributor to the economy (Subroto

et al., 2024). Enhancing employee performance in a business can be achieved by recruiting talented and highly skilled individuals. By fostering their growth and ensuring their retention, the organization can effectively meet its strategic goals (Harahap et al., 2024). To ensure the company attracts, hires, retains, and engages talented employees, it integrates multiple HR functions. By focusing on continuous development and fair recognition, the company can enhance productivity, reduce turnover, and build a strong talent pipeline for long-term success (Mahato & Kaur, 2023; Karalar & Atay, 2020). In order to produce or developing talent is the process of fostering, developing, and strengthening current personnel and new hires (Mantow & Nilasari, 2022). Talent management strategies focus on accelerating individual learning, strengthening skills, and preparing employees to tackle both present and future demands. These practices are vital for organizations, as they boost employee performance and contribute to achieving business goals more effectively (Thakur & Sanjrani, 2024; Laras et al., 2019). The foundation for enhancing and employing suitable talents in the future for the company's advancement is the management of talent qualifications. Organizational goals are supported and attained through talent development, management, and acquisition. An organization's performance is mainly driven by human resources, so this management is crucial. Many organizations fail to prioritize talent management, often neglecting proper planning and direction. This oversight negatively impacts both managerial effectiveness and overall organizational performance (Ikhsanuddin et al., 2024; Sopiiah et al., 2020).

According to Sembiring and Damayanti (2023), organizational success relies on effective talent management practices, which aim to identify, develop, deploy, and retain high-potential employees. The study emphasizes the importance of implementing the best talent management practices to ensure an organization's success and growth. (Mutinda, 2017). Kushwaha and Singh (2023) argue that in order to build a trained and capable workforce, talent management includes a wide variety of strategies for finding, nurturing, and using high-potential people inside an organization. When implemented strategically, talent management will enhance knowledge management, which in turn may enhance employee performance (Ekhsan et al., 2023; Bani-Hani, 2021; Bibi, 2018). In conclusion, by paying attention to effective talent management, companies or organizations can improve employee performance and encourage their involvement in employment.

This study, "The Influence of Talent Management Practices on Employee Performance in Service-Based Organizations in Surkhet District," is driven by the importance of talent management in improving organizational success and employee performance. In the competitive service industry, good talent management is key to attracting, developing, and keeping skilled workers, which helps organizations succeed.

The lack of strategic talent management practices may limit the ability of these organizations to achieve competitive advantage and deliver quality services. This study seeks to address the gap in understanding how talent management practices influence employee performance in the context of service organizations in Surkhet, providing insights to improve workforce management strategies and organizational outcomes. The general objective of this study is to examine the influence of talent management practices on employee performance in service-based organizations in Surkhet District. The study examines how these practices affect performance in the Surkhet District, providing useful insights for better managing human resources and achieving long-term growth.

Review of Literature

Talent Planning and Employee Performance

Talent planning is integral to enhancing employee performance. Organizations can create a more effective and high-performing workforce by focusing on aligning values, developing competencies, and empowering employees (Nurung et al., 2023). Organizations that focus on talent planning are better positioned to retain their top talent. The evidence presented in their paper supports the notion that by offering career progression opportunities and adequate benefits, organizations can enhance employee commitment and performance (Thakur & Sanjrani, 2024). Talent planning is statistically significant in influencing employee performance. Organizations can significantly enhance their workforce's performance by focusing on strategic HR planning, integrating learning and development, ensuring fair compensation, and maintaining high levels of employee engagement (Waliyati & Supratikta, 2024). The study indicates that succession planning positively influences employee performance. This effect is particularly noted in the commercial banking sector in Pakistan, where the authors found a significant correlation between effective succession planning and enhanced employee outcomes (Insights from Pakistan's Commercial Banking Sector, 2020).

Based on the insights provided by the experts regarding the significant impact of talent planning, it has a statistically significant effect on employee performance, The present researcher proposes the following hypothesis:

H_{A1}: Talent planning significantly affects the employee performance.

Developing Attracting and Employee Performance

Understanding generational differences in the workplace is crucial for attracting and retaining talent. Developing and attracting talent has a statistically significant effect on employee performance. By understanding generational influences, implementing effective development programs, redesigning performance management systems, ensuring knowledge retention, and managing a global workforce, organizations can create an environment that fosters high performance and engagement among employees. Developing and attracting have a statistically significant effect on employee performance (France et al., 2009). The researcher indicates that organizations that adopt ITD strategies can achieve long-term sustainability and competitive advantage. Developing and attracting talent are crucial components that significantly affect employee performance. Organizations prioritizing inclusive talent development can foster a more engaged and capable workforce, leading to improved performance and organizational success (Kaliannan et al., 2023). The study's findings show that talent management practices significantly affect employee performance. This means organizations that focus on attracting and developing talented individuals are likely to see improvements in overall employee performance (Ekhsan et al., 2023). The study's findings suggest a statistically significant relationship between the development and attraction of talent and employee performance. This is evidenced by the positive effects observed in the data collected from 532 owners/managers in organizations (Rožman et al., 2023). Based on the insights provided by the experts regarding the significant impact of developing and attracting, it has a statistically significant effect on employee performance. The present researcher proposes the following hypothesis:

H_{A2}: Developing and attracting have a significant effect on employee performance

Recruitment and Retention and Employee Performance

The study concludes that effective recruitment and retention strategies can help organizations like AACT retain employees for longer. Recruitment and retention

strategies significantly influence employee performance by hiring and retaining the right individuals, fostering engagement, and minimizing turnover-related disruptions (Saarkwah, 2018). The analysis in the paper provides statistical evidence supporting the hypotheses that recruitment and employee retention significantly affect employee performance. The reported coefficients and T-statistics confirm these relationships, indicating that employee performance also increases as recruitment and retention improve (Sutanto & Kurniawan, 2017). Many organizations overlook the costs associated with staff turnover and the benefits of retention. A clear understanding of these factors can lead to more strategic recruitment and retention efforts. Effective recruitment and retention strategies are vital for enhancing employee performance. Organizations can create a supportive environment that fosters high employee performance by focusing on long-term investment, community involvement, and continuous evaluation (Larson et al., 2012). The study identifies a direct link between individual-level actions (like recruitment and retention) and organizational-level outcomes (such as success). This study strongly supports the notion that effective recruitment and retention strategies statistically affect employee performance. By focusing on these areas, organizations can enhance their human capital, leading to tremendous success and sustainability in their operations (Barinua, 2022). The relationship between recruitment, retention, and performance is cyclical. Satisfied and engaged employees can become brand ambassadors, attracting new talent. This cycle reinforces the importance of effective talent management in achieving good business outcomes and enhancing employee performance (Human Resource Management International Digest, 2019). The present researcher proposes the following hypothesis:

H_{A3} Recruitment and retention significantly affect the employee performance

Rewarding and Compensation and Employee Performance

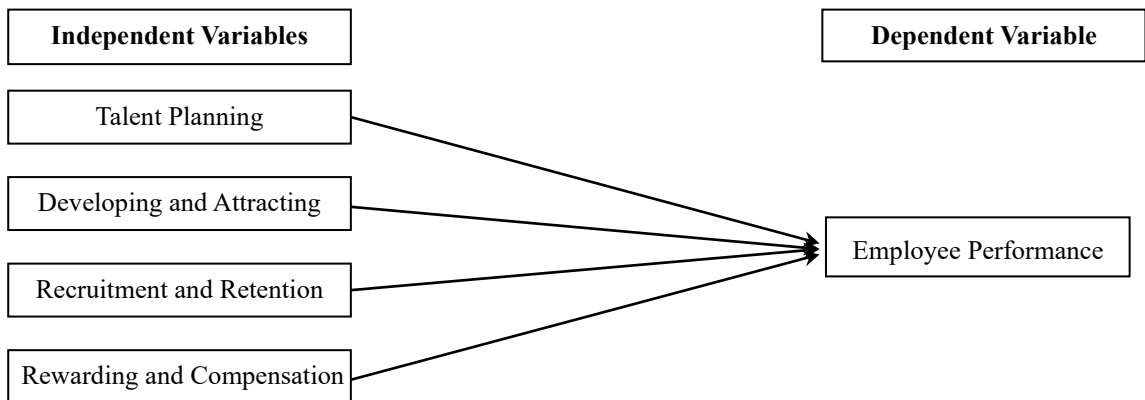
Empirical results have shown that rewards and compensation significantly affect employee performance. This consistency across different studies reinforces the conclusion that effective reward systems are essential for enhancing employee performance (Lipuku et al., 2022). Studies indicate that a well-structured compensation and reward system significantly enhances employee performance. When employees receive satisfactory compensation, they are more motivated to exert significant effort in their roles, leading to improved performance outcomes (Sejal & Bhavikatti, 2024). The

study provides substantial evidence that rewards and compensation have a statistically significant effect on employee performance. These findings advocate for strategic management practices that prioritize employee rewards to foster a motivated and high-performing workforce (Chinedu, 2021). The study indicates that compensation (X1) has a positive and significant influence on employee performance (Y). This is supported by a t-count of 3.113, which exceeds the critical threshold, confirming that as compensation increases, employee performance also improves significantly (Ghifary & Syamlan, 2024).

The experts mentioned above noted that recruitment and retention influence employee performance. Based on this finding, the researcher presents the following hypothesis. Based on this data, the current researcher hypothesized the following:

H₄₄ Rewarding and compensation significantly affect the employee performance

Conceptual Framework



Methodology

This study adopted a causal-comparative research design, incorporating independent variables such as talent planning, developing and attracting, recruitment and retention, rewarding, and compensation, with employee performance as the dependent variable. To ensure data reliability and validity, structured questionnaires were developed through expert consultation and a review of prior literature. The questionnaires comprised two types of questions: multiple-choice, close-ended questions to collect demographic information and a Likert scale to measure responses related to the study's core focus. A total of 345 questionnaires were distributed to employees in various service sectors, including cooperative organizations, hotels, and boarding schools in

Surkhet municipality, with 315 complete responses received. Respondents were asked to allocate time for completing the questionnaires, which were then distributed using convenience sampling, where participants were selected based on their availability and willingness to participate. Cronbach's Alpha was used to evaluate data reliability, and descriptive and inferential statistical methods were applied to analyze the data. Data analysis was performed using SPSS version 25.

Reliability

To evaluate the internal consistency or dependability of a collected of items and make sure they consistently measure the same construct, Cronbach's alpha has calculated (Habes et al., 2023).

Table 1

Reliability Statistics of the Variables

Variable Name	No. of Items	Cronbach's Alpha
Talent Planning	6	0.892
Developing and Attracting	6	0.891
Recruitment and Retention	6	0.917
Rewarding and Compensation	6	0.948
Employee Performance	6	0.897

The results presented in Table 4 demonstrate excellent internal consistency across all measured variables, with Cronbach's Alpha values well above the 0.70 threshold, indicating high reliability(Christmann & Van Aelst, 2006). Talent Planning ($\alpha = 0.892$), Developing and Attracting ($\alpha = 0.891$), and Employee Performance ($\alpha = 0.897$) exhibit strong reliability, while Recruitment and Retention ($\alpha = 0.917$) and Rewarding and Compensation ($\alpha = 0.948$) show even greater consistency, reflecting near-perfect scale reliability. These findings confirm that the measurement instruments for each construct are robust and internally consistent, ensuring that the items accurately assess their intended dimensions.

Content validity was applied to ensure the validity of the research instrument. To ensure the content validity of the questionnaire on talent management and employee performance, key constructs above variables were identified through a literature review

and used to create relevant items. Further, experts' and professionals' reviews were considered to ensure the constructs were comprehensively represented.

Results and Discussion

Table 2

Demographic Profile of the Respondents

Demographic	Categories	Respondents	Percentage
Age Status	Up to 25 years	58	18.41
	26-35 years	174	55.20
	36-45 years	76	24.13
	46 and Above years	7	2.22
Gender Status	Male	186	59.05
	Female	129	40.95
Cast Status	Brahmin	108	34.29
	Chhetri	152	48.25
	Janajati	34	10.79
	Dalit	8	2.54
	Others	13	4.13
Marital Status	Married	223	70.79
	Unmarried	92	29.21
Educational Status	Up to SLC/SEE	12	3.81
	Up to + 2	92	29.21
	Bachelor	155	49.21
	Master and above	56	17.78
Experience	Up to 5 years	173	54.92
	6 -10 years	84	26.67
	11 or above years	58	18.41

Table 2 shows various demographic characteristics of the respondents. Regarding age, respondents ranged from up to 25 years, with 18.41 percent aged 26-35 years, 55.20 percent aged 36-45 years, 24.13 percent aged 34 to 41, and 2.22 percent aged 46 and Above years. Similarly, the gender distribution comprised 59.05 percent male and 40.95

percent female participants. Regarding caste distribution, 34.29 percent of respondents identified as Brahmin, 48.25 percent as Chhetri, 2.54 percent as Dalit, and 4.13 percent belonged to other castes. Marital status showed that 70.79 percent of respondents were married, while 29.21 percent were unmarried. Educationally, 3.81 percent of respondents completed education up to SLC/SEE, 29.21 percent held up to + 2, 49.21 percent had bachelor's degrees, and the remaining 17.78 percent had qualifications beyond the Master's and above. Further, regarding work experience, 54.92 percent of respondents had up to 5 years of experience, 26.67 percent had 6 to 10 years of experience, and 18.41 percent had 11 or above years of experience. These statistics provide a comprehensive demographic overview for further analysis.

Inferential Statistics

Table 3

Correlations

	TP	DA	RR	RC	EP
TP	1				
DA	.310**	1			
RR	.429**	.289**	1		
RC	.223**	.388**	.443**	1	
EP	.411**	.385**	.454**	.408**	1

***Correlation is significant at the 0.01 level (2-tailed) N = 325.*

Table 3 displays the outcomes of the correlation analysis, exploring the relationships among the variables. The matrix indicates significant positive correlations, with the strongest links found between RR and EP (0.454), RR and RC (0.443), and TP and RR (0.429), reflecting moderate to strong associations. Moderate correlations are also evident between TP and EP (0.411), RC and EP (0.408), DA and RC (0.388), and DA and EP (0.385). Weaker yet significant relationships are observed between TP and DA (0.310), DA and RR (0.289), and TP and RC (0.223). All correlations are statistically significant at the 0.01 level, implying that as one variable increases, the other tends to increase as well, albeit with varying strength. Overall, RR and EP exhibit the strongest relationship, while TP and RC show the weakest.

Table 4*Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.581 ^a	0.337	0.329	0.54547	1.468

a. Predictors: (Constant), RC, TP, DA, RR

The model summary in Table 4 indicates that the predictors (RC, TP, DA, RR) collectively explain approximately 33.7% of the variance in the dependent variable, as evidenced by the R Square value of 0.337. The Adjusted R Square, which accounts for the number of predictors, is slightly lower at 0.329, suggesting a modest but statistically significant explanatory power. The standard error of the estimate (0.54547) reflects the average deviation of observed values from the predicted values, indicating moderate precision in the model's predictions. The Durbin-Watson statistic of 1.468 falls within the acceptable range (typically 1.5–2.5), suggesting no severe autocorrelation in the residuals, though it may warrant further investigation for potential mild positive autocorrelation. Overall, the model demonstrates a moderate fit, with room for improvement in explanatory power.

Table 5*ANOVA^a*

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	46.969	4	11.742	39.465	.000 ^b
Residual	92.237	310	0.298		
Total	139.206	314			

a. Dependent Variable: EP

b. Predictors: (Constant), TP, DA, RR, RC(Talent planning, developing and attracting, recruitment and retention, rewarding and compensation, employee performance)

Level of Significance=0.05: N=315

The ANOVA results in Table 5 indicate that the regression model is statistically significant in predicting the dependent variable. The regression sum of squares (46.969)

represents the variance explained by the model, while the residual sum of squares (92.237) reflects unexplained variance. With 4 degrees of freedom for regression and 310 for residuals, the mean squares were 11.742 (regression) and 0.298 (residual). The high F-statistic (39.465) and a highly significant p-value (.000b) suggest that the regression model fits the data significantly better than a model with no predictors. This implies that at least one of the independent variables in the model has a meaningful relationship with the dependent variable. The total variance (sum of squares = 139.206, $df = 314$) confirms the model's overall explanatory power.

Table 6

Results of Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	1 (Constant)	0.538	0.135				3.999
TP	0.239	0.058	0.216	4.121	0.000	0.777	1.287
DA	0.192	0.055	0.180	3.461	0.001	0.795	1.258
RR	0.216	0.054	0.225	4.032	0.000	0.687	1.456
RC	0.140	0.040	0.190	3.512	0.001	0.730	1.371

The linear regression analysis results (Table 6) indicate that all four predictors—TP ($t = 4.121$, $p < 0.001$), DA ($t = 3.461$, $p = 0.001$), RR ($t = 4.032$, $p < 0.001$), and RC ($t = 3.512$, $p = 0.001$)—are statistically significant predictors of the dependent variable. The unstandardized coefficients (B) suggest that TP has the strongest effect ($B = 0.239$), followed by RR ($B = 0.216$), DA ($B = 0.192$), and RC ($B = 0.140$). The standardized coefficients (Beta) show similar relative contributions, with RR having the highest standardized impact ($Beta = 0.225$). Collinearity statistics (Tolerance > 0.1 , VIF < 5) indicate no multicollinearity concerns. The constant term is also significant ($t = 3.999$, $p < 0.001$), suggesting the model accounts for meaningful variance in the outcome. Overall, the model demonstrates that each predictor significantly and independently contributes to explaining the dependent variable.

These results indicate that all four factors significantly influence employee performance in the study area.

Table 7*Summary of Hypothesis*

Hypothesis No.	Results of Hypothesis	Accept or Reject Decision
H _{A1}	Talent planning has a statistically significant effect on employee performance.	Accepted
H _{A2}	Developing and attracting have a statistically significant effect on employee performance.	Accepted
H _{A3}	Recruitment and retention have a statistically significant effect on employee performance.	Accepted
H _{A4}	Rewarding and compensation have a statistically significant effect on employee performance.	Accepted

This study aimed to analyze the impact of talent management on employee performance within the service sector of Surkhet District, Karnali Province. The research focused on four key variables: talent planning, talent development and attraction, recruitment and retention, and rewarding and compensation. The findings from the linear regression analysis revealed several significant insights, which are discussed in detail below. The study confirms a significant linear effect of talent planning on employee performance. The result validates the first hypothesis, H_{A1}. This result aligns with the study of Sanjrani, 2024 Waliyati, Supratikta, 2024; Nurung et al., 2023). Similarly, the study revealed a significant linear effect of developing and attracting employee performance and confirms the second hypothesis (H_{A2}), which is similar to the study of (Ekhsan et al., 2023 Kaliannan et al., 2023 Rozman et al. 2023; France et al. 2009). The findings showed a significant linear effect of recruitment and retention on employee performance. This result confirms the third hypothesis (H_{A3}) and aligns with the result of the study (Barinua, 2022; Saarkwah, 2018; Sutanto & Kurniawan, 2017; Larson et al., 2012). Further, the results validated the fourth hypothesis (H_{A4}), which states that rewards and compensation have a significant linear effect on employee performance. This result is like the study's findings (Ghifary & Syamlan, 2024; Sejal & Bhavikatti, 2024; Lipuku et al., 2022; Chinedu, 2021).

Conclusion

This study demonstrates that talent management practices, specifically talent planning, developing and attracting, recruitment and retention, and rewarding and compensation, significantly impact employee performance within the service sector of Surkhet District. The positive relationships identified between these factors and employee performance validate the study's hypotheses and align with previous research, reinforcing the critical role of talent management in achieving organizational objectives.

The findings indicate that each factor is crucial in positively influencing employee performance. Strategic talent planning ensures that the right individuals are positioned in roles that align with organizational objectives, enhancing overall productivity. Investing in employee development and attracting top talent enhances workforce skill levels, engagement, and innovation. Effective recruitment practices bring in qualified candidates, while strong retention strategies reduce turnover, ensuring workforce stability and consistent performance. Competitive compensation and well-structured reward systems boost motivation, job satisfaction, and employee commitment, leading to improved performance. Each of these factors plays a crucial role in influencing employee performance positively.

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The Influence of Workforce Diversity on Employees' Performance in Co-Operative Organizations of Kanchanpur

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Abstract

Workforce diversity in cooperative organizations is a concept that has gained increasing significance in recent years. Cooperative organizations are typically structured around the principles of equality, democracy and solidarity and many of them have a long history of promoting diversity and inclusively within their membership and workforce. The background of workforce diversity in cooperative organizations can be traced back to the core values and principles that underpin the cooperative movement. The primary goal is to look into the relationship between workforce diversity and employee performance in the Kanchanpur district's cooperative organizations. The research design used in the study was descriptive. Using cluster and purposeful selection methods, 400 workers from various cooperative groups were chosen to participate in the survey. Data was collected using physical questionnaires and a structured questionnaire. To examine the impact of workforce diversity on employees' performance, regression analysis has been conducted. The findings showed that employees' performance is positively impacted by diversity in terms of gender, race, and job experience. Employee performance is also negatively impacted by physical disabilities. This study demonstrates how employee performance in Kanchanpur district cooperative organizations is impacted by workforce diversity. These findings can also be utilized to develop plans to enhance the way that current cooperative organizations implement staff diversity. This study looked at several facets of diversity and their connections to performance. For example, while physical problems have a detrimental effect on employees' performance, ethnicity, education, and job experience have a beneficial effect. Only the Kanchanpur cooperative in Nepal has taken this study into consideration; however, additional research can be conducted in other industries, such as manufacturing, hotels, hospitality, and other governmental and nongovernmental organizations.

Keywords: Ethnicity Diversity, Gender Disability, Work Experience Diversity, Specifically Challenged Diversity, Employee Performance

Introduction

Workforce diversity in cooperative organizations is a concept that has gained increasing significance in recent years. Cooperative organizations are typically structured around

the principles of equality, democracy and solidarity and many of them have a long history of promoting diversity and inclusively within their membership and workforce. The background of workforce diversity in cooperative organizations can be traced back to the core values and principles that underpin the cooperative movement.

In the dynamic and competitive cooperative climate, workforce diversity is being increasingly acknowledged as one of the most crucial tools for cooperative organizations in terms of achieving their goals and delivering good service. According to research by Mushtaque et al. (2021), workforce diversity is the state in which members of a group or organization differ in terms of their age, size, color, ethnicity, immigration status, and educational attainment. Jackson et al. (1995) diversity is the existence of differences among group members. Given the growing diversity of people worldwide in terms of their race, age, national origin, gender, ethnicity, and other personal characteristics, diversity is an essential component of institutional life for businesses. Workforce diversity is the state in which individuals within a group or organization are different from one another in terms of demographic characteristics such as age, gender, race, ethnicity, immigration, and composition (Erasmus, 2008). Workforce diversity demonstrated that hiring was done from a varied of individuals at all levels of the organization, and that diversity was reflected in company literature, a website, etc (Khera & Gulati, 2015). Kochan et al. (2003) argues that diversity can elicit a range of emotions in the workplace since not everyone sees it as a tool for organizational development but rather as something that needs to be handled. Numerous experts agree that diversely aware organizations provide results that are more valuable. Organizations provide more worthwhile outcomes. According to Brown and Lam (2008), businesses that embrace diversity will see more cost savings from staff turnover and sales growth than those who do not. Businesses who view diversity as an essential component of their approach, as opposed to a necessary evil, will gain significantly more advantages than those that do not. (Choi, 2007) expressed that diversity promotes synergistic success when individuals inside organizations are able to relate to, respect, and learn from one another while using one another's experiences, skills, and perspectives. According to Kathimba and Anyieni (2018), workforce diversity (WFD) is frequently defined by the similarities and differences among WFD with respect to age, sexual orientation, cultural background, race, religion, and physical and mental abilities. In addition to this, people also differ in their interests and viewpoints. Society has traditionally been split on these points of view. Every organization needs to implement upgraded WFD. However, there

are also substantial administrative challenges when attempting to manage large spreads under WFD. Nepal offers an incredibly diverse range of work. There are many different languages and ethnic groups in Nepal (Shrestha & Parajuli, 2020). There are several different ethnic groups in Nepal. In the same way that members of various ethnic groups have diverse languages and religions (Shrestha & Parajuli, 2020). The majority of people, or 81.3%, identify as Hindu. Similarly, 4.4% of people in Nepal are Buddhist. 1.4% are Christians, and 3% are Kirats. Nonetheless, foreign cultures have a significant influence on Nepalese civilization (CBS, 2012). According to Wikipedia, Nepal has 129 languages, 125 castes, and ethnic groupings. These all increase the diversity of employees in Nepali workplaces. Nonetheless, foreign cultures are increasingly influencing Nepalese society (CBS, 2012). According to Wikipedia, there are 129 ethnic groups, 125 castes, and 129 languages in Nepal. Workplaces in Nepal employ a diverse spectrum of people. Diversity can elicit a range of emotions in the workplace since it is perceived as a problem that has to be resolved rather than as a tool to advance the business, claim Kochan, Bezrukova, Ely, Jackson, Joshi, Jehn, & Thomas (2003). Many academics concur that companies that value diversity get better outcomes. Businesses that respect diversity will do better financially than those that don't because of lower attrition and higher sales (Brown & Lam, 2008). Companies who see diversity not as a necessary evil but as an essential part of their strategy will make a lot more money than those that don't. Diversity promotes synergistic success, according to Choi (2007), when workers in an organization are able to accept and understand one another as well as benefit from one another's experiences and viewpoints.

The majority of businesses today are aware that they operate in a volatile and dynamic business environment, one that is characterized by shifting consumer purchasing patterns, volatile prices, an influx of supply and demand forces, the introduction of new laws, and unexpected changes in the political environment.

(Davies & Shaw, 2010) Workforce diversity is now not an option but a requirement for multinational companies with a global presence. The severe competition in business, the growing labor mobility, and the development of laws and policies that support equality and justice in the organization's recruiting and selection of personnel all have an impact on this issue (Karsten, 2006). The idea of a diverse workforce has been embraced by local government in particular. The cooperative organization has adopted the idea of workforce diversity as one of its strategies and a competitive advantage to achieve its

primary goals and objectives. This strategy aims to increase the effectiveness of service delivery, hold employees accountable, and boost organizational performance. Workforce diversity is supported through the ministry's hiring of employees from a variety of educational, age, gender, cultural, and ethnic backgrounds (Kundu & Mor, 2017). Although the concept of workforce diversity has been integrated into cooperative organizations with greater accomplishments and success, the cooperative organization has not yet achieved its peak performance, which raises the need to investigate the effects of workforce diversity on these employee performances.

Review of Literature

Diversity

The term "diversity" refers to the range of individual variances. It includes every quality that distinguishes each of us as unique. The idea that diversity is limited to particular people or groups is a prevalent misunderstanding. In reality, this is untrue. It encompasses not just one's own idea of oneself but also one's view of others and how those perspectives influence one's interactions with others. Diversity is a representation of individual differences. Disparities may arise from individual characteristics and life experiences and may influence opinions. Diversity encompasses a person's whole range of unique distinctions, such as race, ethnicity, gender, age, sexual orientation, religion, and physical impairment.

Communication style, work style, organizational role/level, economic position, and place of origin are also included. Every individual has distinct qualities in each of these areas, which is a basic fact.

According to data analyzed from developing SEM models, validity and reliability tests, and SEM analysis research, Sentoso & Muchsinati (2025) found that the work environment, leadership, training & career development, compensation, team & coworker relations, workplace welfare, and organizational policies all positively and significantly influence employee engagement.

It includes, among other things, cultural components such as race, gender, physical prowess, ethnicity, and value systems. Diversity in the workforce, which includes characteristics like gender, age, ethnicity, and educational background, can encourage more creativity and innovation, but it can also cause management problems. Karyati and Yuniastri, 2025.

Because different viewpoints can inspire unique and creative approaches to problem-solving, which in turn fosters creativity and innovation and enhances performance, having a diverse workforce can provide businesses a competitive edge.

Ethnicity Diversity

Ethnic diversity and representational execution are receiving more attention in the academic community and the general public. However, if the bulk of the team members come from different ethnic backgrounds, then greater diversity improves performance (Setati et al., 2019).

Language, faiths, ethnicities, and societies are all examples of ethnic variety. The local cooperative has seen an increase in its multicultural workforce in order to use more significant support and collaboration to create progress and improve worker satisfaction and local cooperative performance.

When it comes to group performance in terms of neighborhood government outcomes, such as feasible benefits, exchanges, and neighborhood level progress, a direct level of ethnic variations has little bearing. Better performance results in more enjoyment, which is a direct consequence of rising levels of corporate social responsibility (CSR) and community mindedness, especially in light of the recent growth in diversity (Denisse, et al., 2022).

Work groups have also grown in number, with the intention of boosting involvement to enhance overall performance among employees and cooperative organizations.

Nonetheless, the workforce's composition is quickly changing in terms of gender, age, race, education, and other characteristics. Nonetheless, the workforce's composition is quickly changing in terms of age, gender, ethnicity, education, and other characteristics. Collectivism strengthens these bonds, and female business owners who engage in more CSR are more successful.

This study employed a mixed paradigm and descriptive survey approach to sample government ministries, non-governmental organizations, higher education institutions, and political parties with or without representation in parliament (Lufeyo & Thelma, 2023).

Gender Diversity

Research on gender diversity focuses on how individuals view the distinctions between men and women. These gender disparities affect how people react to the actions of others in the workplace and other contexts. Discrimination, prejudice, and misconceptions are all manifestations of gender diversity. After establishing the relationship between GDDB and performance, the study will look at how GDDB influences three business strategies used by cooperatives to obtain a competitive advantage (Eleana et al., 2020). Recent research on cooperative organizations has placed a strong emphasis on the barriers that women face in achieving professional success. Nevertheless, despite advancement into middle-level roles, relatively few women are able to overcome the high society that male officials usually establish at the top of the local government. Heejung et al. (2023) examined organizational support theory provided additional insight into the function of gender in hospitality firms as well as the factors influencing employee helpful behavior. This underlines the difficulty in advancing one's career due to the presence of women in senior positions in some cooperative organization. The private sector is perceived as influential, powerful, and financially successful.

This phrase describes a subtle barrier that is so strong but so evident that it can keep women from rising to the top. The phrase "glass ceiling" was used to describe the rules and practices of cooperative organizations that hinder and limit women's advancement to the top of their respective fields. Removing the "glass ceiling" and other obstacles that prevent women from achieving their goals is a major task for cooperatives.

Cooperative organizations must therefore put in place policies and initiatives that support gender equality in women's pay and other benefit plans, as well as those that support gender equality in compensation for equal-value employment and other benefit plans that are especially important to women.

Work Experience Diversity

According to (Ansari & Pathak, 2016), experienced employees are considerably more productive since they are very knowledgeable about how to operate successfully and

efficiently, how to handle clients, work pressure, and peer pressure. Although other factors, such as skills and expertise, offer more value to work performance, most institutions appreciate the work experience of the staff.

Employee career growth at work can be enhanced by training, motivation, and job performance. It is advised to enhance employee work performance, motivation, and training programs. In order to obtain better results, we recommend expanding the population and factors for future research (Niati et al., 2021).

Ghani et al. (2022) expressed that this study found that employees with varying levels of job experience had different job experiences to achieve better job performance. Defined as assessing whether strategies for recruiting and retaining staff with Experience how experienced employees can improve their job performance if they provide proper guidance to junior staff. Long-experienced employees perform their duties on time as compared to younger employees, minimum job experience-to-job performance ratio. Good leadership for job performance of employees with job experience performs better if the council has guidelines for managing a diverse workforce. For example, whether the resource contributes to an experienced and diverse workforce, and whether the diversity of work experience contributes to the sharing of skills and knowledge among employees.

Specifically Challenged

Organizations employ people with impairments; some are born with them, while others acquire them as a result of diseases and mishaps. In order to guarantee that the cooperative's affirmative action or individuals with disabilities policy was followed, the respondents concurred that a disability mainstreaming policy was in existence. Barba, M.J. Calderon, and Calderon (2020) in light of this, the study's second goal is to analyze socio-labour characteristics, salary disparities, and the extent of inequality in the salary income distribution of the group of disabled workers in the SSE versus CCs in Spain during the Great Recession (2007–2013) and the start of the current economic recovery (2013–2016). Employers are also required to make reasonable adjustments for workers with invisible disabilities, such as fibromyalgia, dyslexia, and depression.

People with disabilities are the largest minority group in the world and comprise a sizable share of the workforce (Jing et al., 2022). To dispel these myths and enhance their working experience, it's critical to recognize that persons with disabilities might

not be involved because of (false) beliefs that they are incapable of doing the work.

Employee Performance

Employee performance, which is assessed using a variety of measures, is the culmination of an employee's choices, actions, and results from carrying out work duties while utilizing certain skills (Hameed & Waheed, 2011). The most valuable asset of any firm, business, or organization is its workforce. The performance of its employees determines whether a commercial organization can endure. Additionally, these scholars believe that productive employees add to the company's efficacy and profitability. Therefore, employee performance is crucial to organizations and the creation of strategies to improve organizational performance. Iqbal et al. (2015) representative execution incorporates executing characterized obligations, assembly due dates, representative competency, viability, and effectiveness in doing work. The current study intends to contribute to the body of knowledge already in existence and provide recommendations for additional research by highlighting trends and gaps in previous studies on the relationship between CG and cooperative performance (Jamaluddin et. al., 2023). In addition to guaranteeing employee welfare and enhancing the corporate climate, high performing HRM operations increase staff productivity (Chali & Lakatos, 2023). According to the results of Saefullah et al. (2025), members were satisfied with the program that the management had put in place, and the Padaidi Jaya cooperative management had done a great job of servicing members. It is acknowledged that the organizational culture, human resource practices, work environment, and business practices of individual organizations differ from one another, and that these differences are likely to obscure the factors influencing employee performance in one company compared to that observed in another.

Social Identity Theory

Although this social psychology theory originated in Europe, it became well-known in the US and other countries. Gender, age, culture, and educational attainment are some of the factors that can be used to create these groups. Furthermore, this theory holds that social identification supports organizations that highlight a group's uniqueness and affects behaviors that represent the group's collective identity (Ashforth & Mael, 2004).

According to this view, there are two halves to an individual's identity. There are two types of elements: public factors that originate from the group's community, such as racial traits, gender, and national background, and personal qualities, such as physical and academic attributes. This theory postulates that in a variety of situations, groups gain self-confidence by recognizing or prejudicing members of other groups. The fundamentals of social identity theory are covered in this chapter, including social categorization and coping with a bad social identity. Two significant application fields are then covered: organizations and health (Scheepers & Ellemers, 2019).

Harwood (2020) examined that based on people's innate desire to see their particular social groups favorably and the intrinsic value they place on belonging to them, social identity theory (SIT) offers a framework for understanding intergroup behavior and communication. Social identity theory research focuses on group relationships, When people start to identify as members of particular groups, they may discriminate against an out-group (groups to which they do not belong but to which they compare their own groups) or favor their in-group (the group with whom they identify) (Vanden & L.J., 2023).

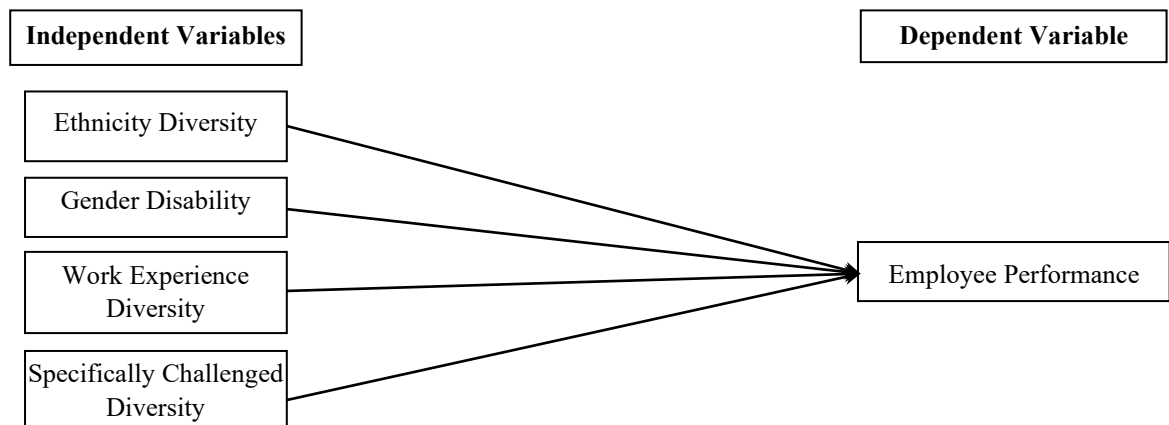
Social Categorization Theory

According to Turner (2007), the social classification theory has served as a guide for workforce diversity. According to this idea, people categorize themselves into identity groups according to distinguishing characteristics, act in ways consistent with those groups, and favor situations that establish fixed group identities (Hogg & Terry, 2000). As a result, (Van Knippenberg et al., 2007) found that different people are less likely to cooperate with each other than similar people. Thus, social taxonomy can hinder elaboration. Social classification involves identifying oneself and others as members of social groups, often unconsciously or unintentionally, based on shared attributes such as ethnicity, physical characteristics, and even psychological characteristics. (Stangor et al., 1992; Kunda & Spencer, 2003; Abrams, 2012). While many of the fundamental ideas from object categorization are applicable to the study of social categorization, there are also some significant distinctions that imply social categorization is more—indeed, much more—than object categorization (McGarty, 2018). Thus, social taxonomy can hinder the elaboration of task-relevant information due to possible biases

toward in-group members and negative biases toward out-group members. The social categorization hypothesis is pertinent to this research because it aims to demonstrate how a change in self-perception from self-categorization in terms of personal identity to self-categorization in terms of social identity can be used to explain the emerging, higher-order processes of group activity. Employee culture can be seen as a component of social category diversity. Employees inside a business can thus classify themselves according to certain cultural group's social categories.

Conceptual Framework

The conceptual framework for this study was developed in light of the literature and discussion mentioned above in order to evaluate workforce diversity and its effect on workers' performance in Kanchanpur cooperative organizations.



Methodology

The quantitative research method was applied in this study. It uses empirical evaluations to describe the goals of the research. According to Cresswell (2013), co-relation research can employ a quantitative research approach. The independent variables in this study—ethnicity, gender, job experience, and education—as well as the dependent variable—employee performance—all have relationship research aims that call for numerical data for statistical analysis. Additionally, according to Yin (2013), a quantitative research approach is appropriate for producing statistics from a large-scale study that uses primary data collection techniques like questionnaires. Because there are many local government employees available, a quantitative research approach is

therefore appropriate for this study.

Table 1

Test of Reliability

No.	Variables	Cronbach Alpha	No. of items
1	Ethnicity Diversity	72.6	8
2	Gender diversity	68.4	8
3	Work experience Diversity	79.8	5
4	Physical challenged Diversity	80.67	7

The Cronbach alpha value for ethnicity diversity, gender diversity, and work experience diversity physical challenged diversity was measured using SPSS-22 version software. The alpha values are near to or above than 0.70 it means the internal consistency of the data is found to be good.

Sample Size and Sample Distribution

Following are the details of samples taken from each municipality and executive in local governments which are selected for the study.

Table 2

List of sample firms

S.N.	Name of the Co-operatives	Sample size
1	Udayadev Multipurpose Co-operative Ltd	70
2	Kishan bahuudheshya Sahakari sanstha Ltd	60
3	Niglashaini Bahuudeshya sahakari Santha	40
4	Mega Bachat Tatha Rin Sahakari Sanstha	50
5	Srijansil bachat Tatha Rin Sahakari Sanstha Ltd	25
6	Hamro Upabhokta Sahakari Sanstha ltd	25
7	Kailpal Krisi Sahakari Sanstha Ltd	25
8	Shrijana Bachat Tatha Rin Sahakari Sanstha Ltd	35
9	Panchadev panchadev Bahuudehsya Sahakari Sanstha Ltd	20
Total		350

Results and Discussion

Demographic Profiles

Table 3

Ethnicity

		Frequency	Percent
Valid	Dalit	20	5.7
	Janjati	50	14.3
	Brahamin and Kshyatri	280	80
Total		350	100.0

From the table it reveals that most of the respondents are from Brahmin and Kshyatri (280 or 80% of the respondents 350), followed by Janajati (50 or 14.3% of the respondents), and Dalit (20 or 5.7 of the respondents).

Table 4

Gender

Gender	Frequency	Percent
Male	215	61.4
Female	135	38.6
Total	350	100.0

The table state that there are near about 62% male and 38% female Co-operative organizations' employees who participated in the survey from the Co-operative organizations in Kanchanpur district.

Table 5

Work Experience

Experience	Frequency	Percent
0-5	180	22.9
6-10	150	42.8
11-15	50	14.3
16-20	50	14.3

Above 20	50	5.7
Total	400	100.0

The table shows that majority portion of the respondents (80 or 22.9%) have less than 5 years of experience, followed by 150 respondents (42.9%) having less than 10 years of experience, 50 respondents (14.3%) have near to 15 years, 50 respondents (14.3%) 20 years and 20 respondents (5.7%) have more than 20 years of experience.

Table 6

Physically Challenged

	Frequency	Percent
Normal	345	98.6
Physical challenged	5	1.4
Total	350	100.0

The table illustrates that 98.6% of the respondents are physically normal and 1.4% is Specifically Challenged.

Table 7

Correlation between Dependent and Independent Variables

Variable		Summated Scale of Diversity
Ethnicity Diversity	Pearson Correlation	0.282**
	Sig. (2-tailed)	.000
Gender Diversity	Pearson Correlation	0.261
		.000
Work Experience Diversity	Sig. (2-tailed)	0.187
		.000
Physically Challenged Diversity	Pearson Correlation	0.138
		.000

**Correlation is significant at the 0.01 level (2-tailed).

Table 7 shows that the correlation between ethnicity diversity, gender diversity, work experience diversity, Physical diversity and employees' performance. The Pearson's correlation coefficient is 0.282, 0.261, 0.187 and 0.138. In this case, the p-value is 0.000 which is less than the alpha value 0.05. It means there is a definite positive and significant relationship between ethnicity diversity, gender diversity, work experience

diversity, Physical challenged diversity and employees' performance. Hence, the null hypothesis (H0) is accepted but alternative hypothesis (H1) is rejected. So it can be conducted that there is a significant relationship between ethnicity, gender, work experience, physical challenged diversity and employees' performance. Similarly Pearson's correlation coefficient is 0.282, 0.261, 0.187 and 0.138 which is greater than alpha value 0.05. It means there is a definite positive and significant relationship between ethnicity diversity, gender diversity, work experience diversity, physically challenged diversity and employees' performance. Hence, the null hypothesis (H0) is accepted but alternative hypothesis (H1) is rejected.

Table 8

Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.483 ^a	0.234	0.220	6.587

Predictors: (constant), Ethnicity diversity, Gender diversity, work experience diversity, specifically challenged diversity

Table 8 shows that the value of R square (0.234) and R 0.483 hence a strong relationship was found between independent and independent variables having a standard error of 6.58692 (Table 8). Moreover, table 8 further presents that employees' performance at cooperative organization is about 48.3% dependent on Ethnicity diversity, Gender diversity, work experience diversity, specifically challenged diversity.

Table 9

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4537.437	6	750.240	17.430	.000
Residual	14881.937	343	43.388		
Total	19419.374	349			

Dependent Variable: Employee performance diversity.

Predictors: (Constant), work experience, educational diversity, physical challenge, ethnicity diversity.

Table 9 presents that the p-value is 0.000 which is less than the alpha value 0.05; hence it says that there is a significant relationship between independent variables and dependent variables. In addition, Table 9 shows a model that is fit for predicting the influence of the independent variables on the performance of employees in cooperative organization.

Table 10

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	28.674	7.358		3.897	.000
The summated scale of Ethnicity diversity	0.319	0.054	0.36	5.877	.019
The summated scale of physical challenged	0.319	0.092	0.245	4.632	.000
The summated scale of educational diversity	0.0426	0.275	0.245	4.20	.000
Summated scale of work experience	0.154	0.114	0.169	2.66	.008

Dependent Variable: The summated scale of employee performance diversity.

Table10 shows regression coefficient that to what dependent variable varies independent variable, in case, all other variables are considered constant. Moreover, the beta coefficient indicated that ethnicity diversity (beta=0.319, t = 28.674, P=.000) had a positive impact on employees' performance. Likewise, gender diversity (beta= 0.319, t= 28.674, P=.000) , work experience diversity (beta= 0.426, t = .28.674, P=0.000) and

specially challenged diversity (beta= 0.154, t = .28.674, P=0.000) have also a positive impact on employee performance at cooperative organization.

Conclusion

To sum up, a diverse workforce is essential to improving worker performance in cooperative businesses. These companies can benefit from the distinct viewpoints, experiences, and abilities of their workers by accepting and appreciating a diverse workforce, which enhances creativity, problem-solving, and decision-making.

In conclusion, a major element influencing worker performance in cooperative organizations is workforce diversity. These companies may promote creativity, teamwork, and organizational success by accepting and valuing a range of viewpoints and experiences. Additionally, encouraging diversity and inclusion represents the principles of equity and fairness that cooperative organizations uphold and improves relationships with clients or members. The study finds that in order to address the workforce diversity challenges that are prevalent in cooperative businesses and have an effect on employees' performance, several programs and policies must be designed.

The conclusions and findings of this study are as follows:

1. In terms of ethnicity 80% of the respondents have Brahmin and kshyatri, 14.3% of the respondents have Janjati and 5.7% of the respondents have Dalit. In terms of gender, there is male domination in workforce having 61.4% male and 38.6% females. Regarding work experience, the workforce having 22.9% belong to 0-5 years, 42.9% work experience belong to 6-10 years, 14.3% work experience belongs 11-15 years, 14.3% work experience belong to 16-20 years and 5.7% work experience belong to above 20 years. Regarding specifically challenged, the workforce having 98.6% of the respondents from 345 are physically normal and 1.4% of the respondents from 5 are physically abnormal.
2. Regarding gender diversity, majority of employees agree that in cooperative organizations women are treated fairly and they are respected equally. From the analysis, the gender diversity has correlation coefficient value of 26.1 with the p-value of 0.000. It shows that the relationship is positive and statistically significant. They also agree that women employees have better opportunities for development

and advancement, but a few of them are neutral on the statement that gender diversity is important to the cooperative organizations. This indicates the need for some more awareness about the important of gender diversity.

3. It is found that work experience persons are treated fairly in the cooperative organizations. The employees believe that the work experience diversity has impact on employees their performance. The analysis, the work experience diversity has correlation coefficient value of .187 with the p-value 0.000. It has shown that the relationship is positive and statistically significant. It is also found the employees feel that work experienced persons are suitable for every position. It means work experience diversity has positive influence on the employees' performance in the cooperative organizations. The findings show that employees have an opinion that work experience diversity has a positive impact on employees' performance.
4. It is found that in this study the employees with specifically challenged are treated fairly in the cooperative organizations. Employees agree that there are some opportunities for physically 5 disabled persons to get the job in the cooperative organizations as there is 5% reservation quota available for them. They also agree that specifically challenged employees are committed, dedicated and hardworking. On the contrary, the employees have some prejudices and misconceptions towards specifically challenged persons such as they need special equipment and materials to perform jobs, and they are only suitable for new positions in the cooperative organizations. Above the analysis, the specifically challenged diversity has correlation coefficient value of 0.138 with p-value 0.010. It has revealed that the relationship is positive and statistically significant. These prejudices create discrimination and differences between physically normal and specifically challenged employees and may impact negatively on their performance. Hence, the cooperative organizations should formulate policies to reduce about physically disabled employees.

Thus, the cooperative organizations need to invest time, efforts, resources, energy and it is observed the workforce diversity in the study that there is a need for designing different programs and policies to address the workforce diversity issues prevailing in the cooperative organizations which has an impact on employees' performance.

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The Role of Workplace Motivators on Employee Retention in the Insurance Industry of Karnali Province, Nepal

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Abstract

Employee retention reflects an organization's ability to maintain its workforce over time, minimizing turnover. This study explores the role of workplace motivators in enhancing employee retention within Nepal's insurance sector, focusing on Karnali Province. Specifically, it assesses how a supportive work environment, training and development opportunities, fair compensation and benefits, and relationships with supervisors and co-workers influence employees' decisions to stay with their organizations. Data were collected from 335 employees across multiple insurance companies using a structured questionnaire distributed through convenience sampling. Pearson's correlation and regression analyses were employed to examine the relationships between the independent variables (supportive work environment, training and development, fair compensation, and workplace relationships) and the dependent variable (employee retention). The findings indicate that all four factors significantly and positively impact employee retention. A supportive work environment fosters motivation and comfort, while training and development opportunities enhance engagement and productivity. Fair compensation and benefits serve as key motivators, reducing financial stress and improving job satisfaction. Additionally, positive relationships with supervisors and co-workers strengthen employees' sense of belonging, further encouraging retention. These results highlight the importance of strategically managing workplace motivators to retain employees and enhance organizational performance. By cultivating a supportive culture, investing in employee growth, offering competitive compensation, and nurturing strong workplace relationships, companies can significantly reduce turnover and sustain a committed workforce.

Keywords: *Employee retention, supportive work environment, training and development, fair compensation, supervisor relationships, co-worker relationships.*

Introduction

Workplace motivators are essential in improving employee retention by fostering a sense of value, job satisfaction, and organizational commitment among employees. As a result, organizations that effectively implement motivational strategies are more likely

to retain skilled and experienced employees over time. Ushakov and Shatila (2021) suggested that fun workplace activities significantly contribute to employee retention by fostering informal connections and friendships among employees. Suryathi et al.(2023); Aman-Ullah et al. (2022) stated that both compensation and the work environment play crucial roles in influencing employee retention, with each factor exhibiting a positive and statistically significant relationship. The study emphasizes the critical role of workplace safety in enhancing employee retention. It is crucial for employee retention, fostering job satisfaction, organizational commitment, and reducing turnover intentions. Similarly, Shammout (2021) stated that a supportive work environment is crucial for employee retention, as it prevents excessive stress and ensures a healthy work environment. Further, Abolade (2018) argued that many workplaces are experiencing layoffs and alternative staffing, leading to job uncertainty among employees due to potential job loss threats. Global research highlights employee turnover as a significant challenge in the modern organization, necessitating the development of retention strategies to retain skilled and committed employees for exceptional customer experiences and market competitiveness(Huang & Torres, 2024). Similarly, organizations are focusing on attracting and retaining key workforce due to increased demand and supply gaps, aiming to retain valued individuals (Naz et al., 2020).

Employee retention remains a critical challenge in the insurance sector, particularly in underserved regions such as Karnali Province, Nepal. While workplace motivators are widely recognized as a pivotal factor affecting employees' decisions to stay with an organization, its interplay with other critical workplace factors such as the work environment, training opportunities, fair compensation, and interpersonal relationships remains underexplored. Existing studies often analyze these factors in isolation, failing to capture their combined influence on employee retention. This fragmented approach has created a significant research gap, particularly in understanding how these interrelated constructs collectively shape retention outcomes. Furthermore, the absence of empirical research focusing on the unique socio-economic and cultural context of the insurance industry in Karnali Province further limits the development of tailored retention strategies. This study aims to address these gaps by examining how workplace motivators, work environment, training opportunities, fair compensation, and workplace relationships collectively influence employee retention in Karnali Province's insurance sector. By doing so, it aims to provide a comprehensive framework to inform policy-making and strategic interventions tailored to this specific region and industry.

Review of Literature

Theoretical Review

Expectancy theory suggests that employees are motivated to exert effort toward achieving organizational goals when they anticipate receiving rewards that they perceive as valuable. This theory establishes a link between effort, high performance, and desired rewards, aligning with the concept of hedonism and the pursuit of satisfaction through valued incentives. Expectancy theory further asserts that individuals are rational decision-makers capable of evaluating potential outcomes and making choices that maximize their valued rewards (Mitchell, 1982).

Empirical Review

Supportive Working Environment and Employee Retention

Research consistently highlights the link between supportive work environment and employee retention across diverse settings. Hanai (2021) revealed that working environment significantly impacts employee retention within banking institutions in Dar es Salaam, Tanzania. The findings suggest that bank managers should prioritize promoting a sense of responsibility and upholding a strong bank reputation, as these attributes are most highly valued by employees. Additionally, they should design and implement retention strategies that align with these priorities. Similarly, Suryathi et al., (2023) conducted the study at ABC Company in Bali found that both compensation and work environment significantly impact employee retention. It concluded that employees who feel adequately compensated and work in a supportive environment are more likely to stay with the company. Additionally, the study also looked at how job security affects employee retention in the banking sector of Bauchi Metropolis. The results indicated that job security did not significantly influence employee retention.

However, the study showed a positive correlation between job security and employee retention, indicating that while job security contributes to retention, it may not be the primary or decisive factor in retaining employees within the examined banks. Further, Torsabo (2021) studied how the work environment affects employee retention at Adamawa State University in Mubi, Nigeria. The findings showed a strong positive connection between the two, with a correlation of $r = 0.556$ and a p-value of 0.000, meaning the relationship was statistically significant. The findings suggest that a supportive and conducive work environment is crucial for retaining employees, providing insights for improving retention strategies within the institution. Likewise,

Itogoro et al. (2023); Msengeti and Obwogi (2015) examined the role of compensation and workplace condition on employee retention in the hotel industry of Mombasa County. The results highlighted that the work environment had the strongest effect on employee retention, demonstrating a statistically significant relationship ($p = .005$). This highlights the need for a supportive work environment to improve employee retention. It shows that a positive workplace plays a key role in keeping employees. Muturu and Mose (2019) established the effect of the working environment on employee retention in selected supermarkets in Kenya the analysis showed a strong link between working conditions and employee retention. The study concluded that working conditions was the most significant factor influencing employee retention.

Existing studies establish a clear connection between workplace conditions and employee retention. Therefore it is proposed that;

H_{A1}: There is a significant impact of supportive working environment on employee retention in insurance industry in Karnali province.

Training and Development Opportunities and Employee Retention

Patil and Patel(2022) examined the link between employee training and retention within India's manufacturing sector. The findings indicate a positive relationship between training and employee retention. It suggests that employee satisfaction with training leads to increased loyalty, emphasizing the role of training and development in enhancing job satisfaction and thereby boosting employee retention. Similarly, Adeyemo et al. (2024) investigated the link between training and development initiatives and employee retention rates in Nigeria's insurance sector. The results demonstrated that both the frequency and quality of training significantly improve job satisfaction among management staff, with training quality having a particularly pronounced impact (F-value of 41.624, $p < 0.001$). Despite the positive effects on job satisfaction, the study found that training frequency and quality did not significantly reduce employee turnover intentions ($F = 0.316$, $p = 0.814$). Likewise, Abba (2018) explored the effect of training and development on employee retention in selected banks within the Bauchi metropolis. The study revealed a positive correlation between TD and employee retention. Further, Anis et al., (2011) analyzed the relationship between employee retention and training and development in Lohore. The findings indicate a positive relationship between training, development, and employee compensation. When employees receive training, it positively affects their compensation packages,

which in turn supports retention. Moreover, Ifeyinwa (2024) examined the role of training and development on employee retention in manufacturing firms across Rivers State. Results show a strong positive correlation between training and development (T&D), including coaching and mentoring, and retention. The study highlights the need for good training and development programs to benefit both employees and the organization.

The existing literature substantiates a strong correlation between training and development initiatives and employee retention. Therefore, it is suggested that:

H_{A2}: Training and development opportunities have statistically significant impact on employee retention in insurance industry in Karnali province.

Fair Compensation and Benefit and Employee Retention

Bokaii(2023) explored the impact of financial and non-monetary incentives on employees' decision to stay with their current employers in Lebanon. Results show that compensation (monetary and non-monetary) rewards significantly influence employee retention. The study suggests companies should prioritize monetary and non-monetary to enhance the employee retention in an organization. It also found a positive correlation between total rewards and employee retention. Similarly, Sorn et al., (2023) investigated the relationship between compensation and employee retention in China. The findings suggest that organizations should implement a holistic strategy, integrating competitive compensation with other elements to create a supportive work environment, ultimately improving employee retention .Likewise, Sai Krishna et al., (2022) observed the impact of compensation on employee performance and retention within a company. It aims to determine if higher compensation leads to better performance and increased employee retention. The research concludes that compensation management directly influences employee performance, with higher pay, bonuses, and rewards positively affecting employee retention in the organization. In the same way, Musau et al., (2024) analyzed the impact of compensation packages on employee retention in Kenya, finding that compensation policy significantly influences retention rates, with a positive and significant influence indicated through regression analysis. Chiekezie et al., (2017) investigated how salary impacts employee satisfaction, which in turn affects employee retention. The study reveals that a lack of effective compensation policies in banks can lead to talent loss to competitors offering better packages, emphasizing the need for a

comprehensive compensation strategy that goes beyond just salary. Further, Dina et al., (2017) explored the role of compensation on employee performance in the hospitality sector in North Sumatra. Results show that satisfactory compensation significantly enhances performance and retention, indicating a positive correlation between compensation and employee retention. Additionally, Ihinmoyan (2022) examined the relationship between employee compensation, retention, and job satisfaction within SMEs in Ondo State, Nigeria. The study identified a strong positive correlation between compensation and retention, demonstrating that providing adequate compensation significantly improves employee retention. Iqbal (2019) emphasized the importance of compensation in retaining skilled employees in Lebanon, highlighting its critical role in organizational success. Research indicates that competitive compensation packages significantly reduce absenteeism while enhancing retention rates, as employees demonstrate greater organizational commitment when their contributions are fairly rewarded.

The above research confirms that training and development opportunities are strongly linked to employee retention. Therefore, it is recommended that:

H_{A3}: Compensation and benefits have statistically significant on employee retention in insurance industry in Karnali province.

Supervisor and Co-workers Relationship and Employee Retention

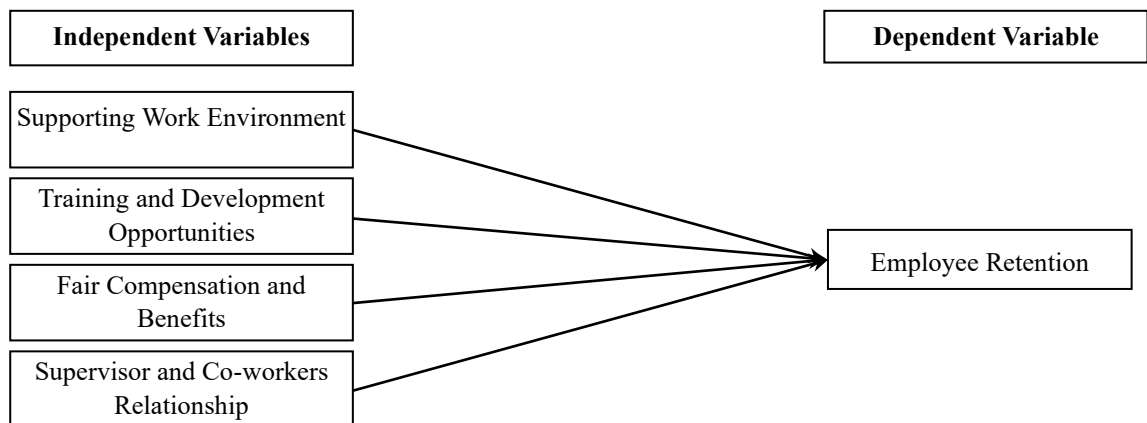
Mutsuddi et al., (2019) investigated the role of supervisor support, co-worker relationship on employee retention within IT firms located in Delhi's National Capital Region. It found that both factors significantly influence employee intention to stay, highlighting the importance of supportive workplace relationships in employee retention. Further, Khan (2021) explored the impact of supervisory support on employee retention in Pakistan. The results revealed that supervisory support significantly and positively influences both employee retention and career commitment. Likewise, Sinha and Mutsuddi (2023) examined the impact of supervisor and co-worker support on employees' intention to stay (ITS) in IT organizations in North India. The study found that supervisor support directly affects ITS, whereas co-worker support enhances social networks and group cohesiveness. Similarly, Tj et al., (2021) examined the impact of compensation and supervisor support on employee retention at PT Pradu, revealing that supervisor support positively influences retention, as employees who feel supported

experience higher job satisfaction. Ritha et al., (2017) explored how job satisfaction affects employee retention within the National Bank of Egypt. The findings indicate that the current motivation system is inadequate. The results imply that the lack of job satisfaction, driven by inadequate compensation and motivation systems, negatively impacts employee retention. Therefore it is proposed that;

H_{AA}: Supervisor and co-workers relationships have a significant impact on employee retention in the insurance industry of Karnali Province.

Conceptual Framework

A conceptual framework is a structured guide in empirical research that links the research problem, objectives, and variables through a theoretical lens, ensuring the study is grounded in existing knowledge, directing data collection and analysis, and enhancing validity (Miles, 1994).



Methodology

The study investigates the impact of workplace motivators on employee retention within the insurance industry of Karnali Province. Data was gathered using a combination of Google Forms and direct personal contact, ensuring a thorough and reliable data collection process. This approach facilitated efficient outreach to a broader audience and provided in-depth insights, resulting in a balanced and thorough data collection. A causal-comparative research design was employed, with 335 questionnaires distributed. Convenience sampling was used for data collection. The study utilized Cronbach's Alpha to assess data reliability, and both descriptive and inferential statistical techniques were applied to analyze the responses. Pearson correlation analysis explored the

relationships between the variables, whereas linear regression measured their effects on employee retention. All analyses were conducted using SPSS version 25 to ensure accuracy.

Reliability and Validity

Cronbach's Alpha is a reliability metric that assesses the internal consistency of a scale, determining if its items cohesively measure the same construct. A high value suggests strong reliability and coherence among the items.

Table 1

Reliability Statistics of the Variables

Variable	Items	Cronbach's Alpha
Supportive Work Environment	6	0.897
Training and Development Opportunities	6	0.833
Fair Compensation and Benefits	6	0.901
Supervisor and Co-workers Relationship	6	0.889
Employee Retention	6	0.827

Table 1 presents the reliability test results for the study variables. The Cronbach's Alpha values were calculated as follows: work environment (0.897), training and development opportunities (0.833), fair compensation and benefits (0.901), supervisor and co-worker relationships (0.889), and employee retention (0.872). All variables demonstrated Cronbach's Alpha values exceeding the established reliability threshold of 0.70, indicating high internal consistency. These results confirm that the measurement scales used in the study are reliable and suitable for data analysis.

Results and Discussion

Respondent Demographic Profile

The table provides a demographic profile of the respondents, categorized by gender, age, marital status, education level, job position, and job duration. The survey provided comprehensive data on the demographic profiles of the respondents, capturing key characteristics and providing a detailed understanding of their background. The gender status of the respondents was 75.8 percent male and 24.2 percent female. Regarding age, respondents ranged from upto 22 years to over 45 above years old, with 2.4 percent

aged upto 22, 60.6 percent aged 23-33 years, 32.5 percent aged 34 to 44, and 4.5 percent aged 45 and above. Marital status showed that 56.7 percent of respondents were married, while 43.7 percent were unmarried. In educational status, 31.6 percent of respondents had completed education in higher secondary, 46 percent held bachelor's degrees, and 22.4 percent had qualifications beyond the master's and above level. Further, regarding the job position, 66.9 percent of respondents had assistant level, 28.1 percent had officer level, 4.5 percent had manager and remaining 0.6 percent had senior manager. Similarly 46.9 percent respondents had below 3 years of experience, 34 percent had 4 to 7 years of experience, 19.1 percent had 8 years and above of experience. The demographics of the respondents have been shown in the table 2.

Table 2*Respondent Demographic Profile*

Demographic	Categories	Respondents	Percentage
Gender Status	Male	254	75.8
	Female	81	24.2
Age Status	Upto 22 years	8	2.4
	23 – 33 years	203	60.6
	34 – 44 years	109	32.5
	45 above years	15	4.5
Marital Status	Married	190	56.7
	Unmarried	145	43.3
Educational Status	Higher Secondary	106	31.6
	Bachelor	154	46.0
	Masters and above	75	22.4
Position	Assistant	224	66.9
	Officer	94	28.1
	Manager	15	4.5
	Senior Manager	2	0.6
Job Duration	Below 3 years	157	46.9
	4 to 7 years	114	34.0
	8 years and above	64	19.1

Inferential Statistics

The study examined the relationships between employee retention and key factors such as work environment, training and development, compensation and benefits, and supervisor and coworker dynamics using Pearson's correlation and linear regression analyses. This approach facilitates to identify the significant predictors and provides a comprehensive understanding of how these factors individually and collectively contribute to changes in employee outcomes, ultimately enhancing the understanding of employee retention in the insurance sector in Karnali province.

Table 3

Correlation Analysis of Independent and Dependent Variable

Variables	WE	TDO	CB	SCR	ER
WE	1				
TDO	.677**	1			
CB	.657**	.749**	1		
SCR	.659**	.700**	.780**	1	
ER	.717**	.733**	.813**	.801**	1

Table 3 presents the findings from the Pearson's correlation analysis conducted among the key study variables. The analysis observed a strong significant positive correlation between employee retention, supportive work environment, training and development opportunities, compensation and benefits and supervisor and co-workers relationship. More specifically, the statistical significance of these correlations, all of which reach the 0.01 level (2-tailed), indicates a P-value less than 0.05. The findings, suggest that employee retention is likely to increase if one aspect is improved, such as working environment, training and development opportunities, Fair compensation and benefits and supervisor and co-workers relationship. The findings' robustness is further proved by their consistency across a sample size of 335 for each variable.

Table 4

Model Summary of Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.875 ^a	0.765	0.762	0.45837	1.888

a. Predictors: (Constant), SWE, TDO, FCB, SCR

b. Dependent Variable: ER

Table 4 summarizes the finding from the regression analysis. The adjusted R^2 value of 0.762 reveals that the supportive work environment, training and development opportunities, fair compensation and benefits, and supervisor and co-worker relationships collectively explain 76.2 percent of the variation in employee retention. The remaining 23.8 percent of the variation is attributed to factors not examined within the scope of this study. The Durbin-Watson static (1.888) suggests no significant autocorrelation in the residuals, which is a good sign for the model's reliability.

Table 5*ANOVA*

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	225.559	4	56.390	268.395	.000b
	Residual	69.333	330	0.210		
	Total	294.893	334			

Dependent Variable: ER

Predictors: (Constant), SWE, TDO, FCB, SCR (Supportive Work Environment), Training and Development Opportunities, Fair Compensation and Benefits, Supervisor and Co-workers Relationship)

Table 5 presents the ANOVA results, revealing an F-test value of 268.395 and a p-value of 0.000. This suggests a statistically significant linear relationship between at least one independent variable and employee retention in the insurance industry of Karnali Province. At the 5 percent significance level, alternative hypothesis is accepted, confirming the validity of the fitted linear model. The study concludes that factors such as a supportive work environment, training and development opportunities, fair compensation and benefits, and positive relationships with supervisors and co-workers significantly and positively influence employee retention in the study area.

Table 6*Coefficients*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
(Constant)	0.110	0.102		1.085	0.279			
1	SWE	0.205	0.039	0.204	5.195	0.000	0.464	2.155
	TDO	0.113	0.044	0.113	2.561	0.011	0.366	2.732
	FCB	0.332	0.046	0.347	7.165	0.000	0.304	3.287
	SCR	0.309	0.044	0.317	6.947	0.000	0.341	2.930

Note: SWE (Supportive Work Environment), TDO (Training and Development Opportunities), FCB (Fair Compensation and Benefits), SCR (Supervisor and Co-workers Relationship), ER (Employee Retention)

Table 6 shows the findings of a linear regression analysis conducted to examine the relationship between various factors and employee retention in the insurance industry of Karnali Province. The independent variables analyzed include supportive work environment, training and development opportunities, fair compensation and benefits, and supervisor and co-worker relationships, with employee retention as the dependent variable. The analysis was performed at a 5 percent significance level and a 95 percent confidence level, revealing significant linear relationships between these factors and employee retention.

The Beta coefficient for a supportive work environment is 0.205, with a t-value of 5.195 and a p-value of 0.000, which is below the 0.05 significance level. This means that improving the work environment by one unit leads to a 0.205 increase in employee retention, assuming other factors stay the same. In simple terms, creating a better work environment helps keep employees.

The Beta coefficient for training and development opportunities is 0.113, with a t-value of 2.561 and a p-value of 0.011, which is below the 0.05 significance level. This means that increasing training and development opportunities by one unit leads to a 0.113 increase in employee retention, assuming other factors remain unchanged. In simple terms, offering better training and development helps retain employees.

The Beta coefficient for compensation and benefits is 0.332, with a t-value of 7.165 and a p-value of 0.000, which is below the 0.05 significance level. This means that increasing compensation and benefits by one unit results in a 0.332 increase in employee retention, assuming other factors remain unchanged. In simple terms, better pay and benefits play a strong and positive role in retaining employees.

Similarly, the Beta coefficient for supervisor and co-worker relationships is 0.309, with a t-value of 6.947 and a p-value of 0.000, which is also below the 0.05 significance level. This means that improving relationships with supervisors and co-workers by one unit leads to a 0.309 increase in employee retention, assuming other factors remain unchanged. In simple terms, good relationships with supervisors and colleagues play a significant role in keeping employees. Tolerance values above 0.1 and VIF values below 10 suggest no significant multicollinearity among the predictors. Thus, the results confirm a meaningful linear relationship between the predictors and employee performance in this study.

The study concludes that supportive work environments, training and development opportunities, fair compensation and benefits, and positive relationships with supervisors and co-workers all have a strong and positive impact on employee retention in the insurance sector of Karnali Province.

Table 7

Summary of Hypothesis

Hypothesis	Results of Hypothesis Testing	Decision
H _{A1}	There is a significant impact of supportive working environment on employee retention in insurance industry in Karnali province.	Accepted
H _{A2}	Training and development opportunities have statistically significant impact on employee retention in insurance industry in Karnali province.	Accepted
H _{A3}	Compensation and benefits have statistically significant on employee retention in insurance industry in Karnali province.	Accepted
H _{A4}	Supervisor and co-workers relationships have a significant impact on employee retention in the insurance industry of Karnali Province.	Accepted

This research aims to explore the role of workplace motivators on employee retention in the insurance industry of Karnali Province, focusing on four key variables: supportive work environment, fair compensation and benefits, training and development opportunities, and supervisor and co-worker relationships. The findings, derived from linear regression analysis, provided valuable insights into how these factors influence employee retention. Specifically, the study seeks to understand the extent to which workplace motivators, along with a supportive work environment, fair compensation, training opportunities, and positive workplace relationships, contributes to retaining employees in the insurance industry of Karnali Province. The study confirms a significant positive relationship between supportive work environment and employee retention, it means validating the first hypothesis. This outcomes is consistent with the finding of previous studies (Hanai, 2021; Suryathi et al., 2023; Abbah, 2017; Torsabo,

2021; Msengeti and Obwogi, 2015; Muturu and Mose, 2019). These studies collectively indicate that a supportive working environment significantly enhances employee retention, underscoring its role as a critical factor in fostering long-term commitment to the organization.

Similarly, the study confirms a strong positive correlation between training and development opportunities and employee retention, thus supporting the second hypothesis. This outcomes is consistent with the finding of previous studies (Patil and Patel, 2022; Adeyemo et al., 2024; Abba, 2018; Anis et al., 2011; Ifeyinwa, 2024). These studies collectively indicate that providing training and development opportunities significantly enhances employee retention, highlighting their role as a critical factor in fostering long-term commitment to the organization. Likewise, the study confirms a significant positive relationship between fair compensation and benefits and employee retention, it means validating the third hypothesis. This outcomes is consistent with the finding of previous studies (Bokaii, 2023; Sorn et al., 2023; Sai Krishna et al., 2022; Musau et al., 2024; Chiekezie et al., 2017; Ihinmoyan 2022; Iqbal, 2019). These studies collectively indicate that offering fair wages and compensation significantly enhances employee retention, emphasizing their role as a critical factor in fostering long-term commitment to the organization. Additionally, the study confirms a significant positive relationship between supervisor and co-workers relationship and employee retention, it means validating forth hypothesis. This outcomes is consistent with the finding of previous studies (Mutsuddi et al., 2019; Khan, 2021; Sinha and Mutsuddi, 2023; Tj et al., 2021; Ritha et al., 2017). These studies collectively demonstrate that strong relationships between supervisors and co-workers significantly improve employee retention, highlighting their importance as a key factor in promoting sustained organizational commitment.

Conclusion

The study concludes that workplace motivators significantly impacts employee retention in the insurance industry of Karnali Province, Nepal. A supportive work environment, access to training and development, fair compensation and benefits, and positive relationships with supervisors and colleagues all play a key role in boosting employee retention. The findings reveal that these factors are positively correlated with retention, emphasizing the need for organizations to prioritize these elements to reduce turnover

and improve organizational stability. By fostering a conducive work atmosphere, investing in employee growth, ensuring competitive compensation, and promoting strong interpersonal relationships, insurance industry in Karnali Province can effectively retain skilled employees, thereby enhancing overall performance and competitiveness.

The findings suggest that the insurance industry in Karnali Province should focus on fostering a supportive work environment, providing training and development programs, and ensuring fair compensation to improve employee retention. Strengthening relationships between supervisors and co-workers is also crucial for fostering a sense of belonging and workplace motivators. By addressing these factors, organizations can reduce turnover, improve stability, and boost overall performance in the competitive insurance sector.

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